

2002

Building community: an environmental approach to crime prevention

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BUILDING COMMUNITY: AN ENVIRONMENTAL APPROACH TO CRIME PREVENTION

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Landscape Architecture

in

The School of Landscape Architecture

by
Gustavo A. Barreto
B.Arch, Universidad del Valle, 1991
May 2002

ACKNOWLEDGMENTS

In first place I want to thank my mother for her continuous support and her patience. I also want to thank all the faculty and classmates at the school of landscape architecture, and especially Bruce Sharky, director of the school and committee chair, for his enormous collaboration in the preparation of this thesis. Anne Spafford, from the school of landscape architecture and Miles Richardson, from the geography and anthropology department, were definitely the perfect complement into the committee to help me tying together the pieces that conform this paper: social and design concepts.

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ABSTRACT

Crime cannot be understood as a single-solution problem. Participation of the community is important to complement and make more efficient any program of crime control by police authorities or any other law enforcement agency.

This thesis is intended to create consciousness among designers of the urban environment of their social role. Cities must include places to promote community interaction and formation of social bonds. As social bonds among residents increase, and bonds with the place begin building a sense of territoriality in the community, the residents become active defenders of the place against crime.

A theory summary presents different and complementary points of view, some focused directly to urban and landscape design such as those stated by Jane Jacobs, Clare Cooper Marcus, Donald Appleyard, and Oscar Newman. Others focused to social and psychological aspects of the relation between humans and environment, for example those presented by Erving Goffman, Edward Hall, Amos Rapaport, Irwin Altman, and Setha Low.

A field study is presented to complement the theory review. It was based on two inner city neighborhoods in Orlando, Florida. The data used came from Orlando Police Department, FBI, and U.S. Department of Justice crime and victimization reports. The population characteristics were analyzed based on the 2000 U.S. Census.

From the study, a general conclusion is that social characteristics of the population in any given neighborhood such as poverty, high percentage of broken families, unemployment, social heterogeneity, large numbers of young population, and large proportion of rented homes create environments highly susceptible of crime. But social characteristics are not the only aspects determining crime. Physical layout of the neighborhood plays also an important role in preventing or promoting crime. In spite of the fact that both neighborhoods had similar social characteristics, crime was considerably higher in the neighborhood where the physical structure neglected possibilities for neighbors to interact and use public areas.

Theories and other information presented is finally synthesized into design guidelines, which are related specifically to the function of landscape architects and other designers as shapers of cities and societies.

CHAPTER 1. INTRODUCTION

1.1 BACKGROUND

One of the biggest problems in our modern cities is the increasing, high rate of crime. Government and law enforcement offices, trying to control this phenomenon, have focused most of their efforts in combating it through repressive or police force-related methods. Many years and an enormous amount of money have been spent but the problem is still considered as the main social concern in modern society. This means that it is time that we consider alternative options for the solution to the problem of criminality in our cities. Instead of combating it, why don't we try preventing it to happen? Oscar Newman, in his book "Defensible Space", states:

The crime problems facing urban America will not be answered through increased police force or firepower. We are witnessing a breakdown of the social mechanisms that once kept crime in check and gave directions and support to police activity...Because of the size and density of our newly evolving urban megalopolis, we have become more dependent on each other and more vulnerable to aberrant behavior than we have ever been before (Newman, 1973).

Another important crime analyst, Richard Gardiner (1978), cites as traditional ways to combat crime: police investigation and arrest procedures, criminal justice punishment and threat of punishment, and individual defensive measures. But in recent years, Gardiner affirms, there has been a change in attitude towards crime, and it is more common to find programs and plans focused in prevention of crime such as: citizens participation in block watch programs, leadership by police in crime prevention programs, community participation in the design of preventive plans, and a closer relationship between citizens and police. Most of the efforts to combat crime until the 1960's were basically through repressive methods, using police and other criminal justice agencies. Just after many years of looking at crime rates rise steadily, governmental agencies began looking for alternative methods for controlling crime, such as opportunity reduction or situational crime prevention, which looks for any flaws in built and social environment that can contribute to crime. In the early 1980's researchers demonstrated the effectiveness of this method. And more recently, a third method to control crime has been implemented in urban centers: social crime prevention, which makes reference to special programs designed to help families and communities in high-risk areas. (Bright, 1992: 17).

Newman also states that the majority of crime in cities is merely opportunistic, that means, conditions of the place give the chances for crime to happen. This theory is supported by Wilson and Herrnstein (1985) who explain that any individual is confronted to different degrees of chances to commit a crime, and that it is the density of such opportunities that make a place less or more safe than other places. Conditions that create these opportunities for crime, among others, are: inadequate outdoors and public-spaces lighting, lack of surveillance, spaces hidden from pedestrian or vehicular view, and many

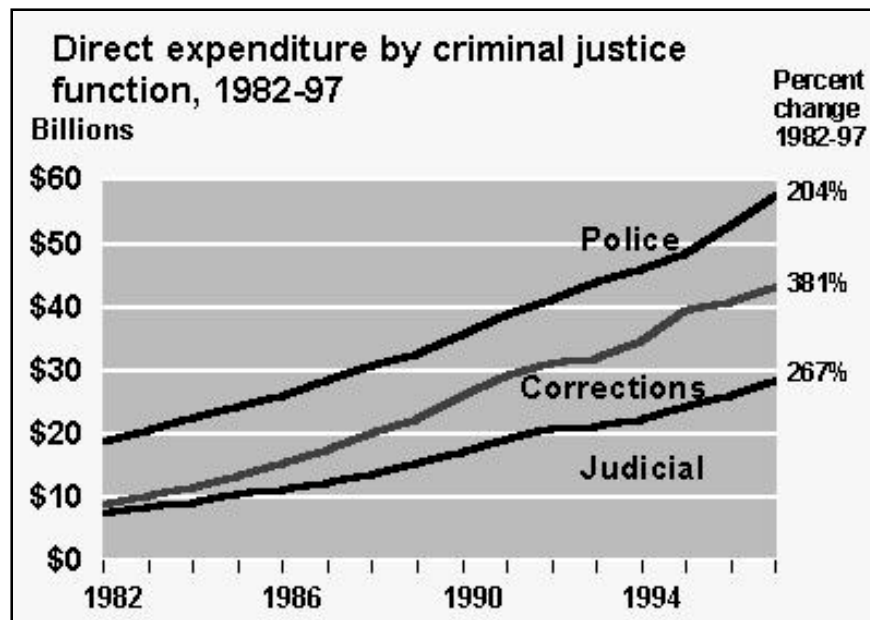


Fig. 1.1a: Expenditure in repressive methods of crime control has been rising steadily during the last years.

Source: U.S. Department of Justice. Bureau of Justice Statistics.

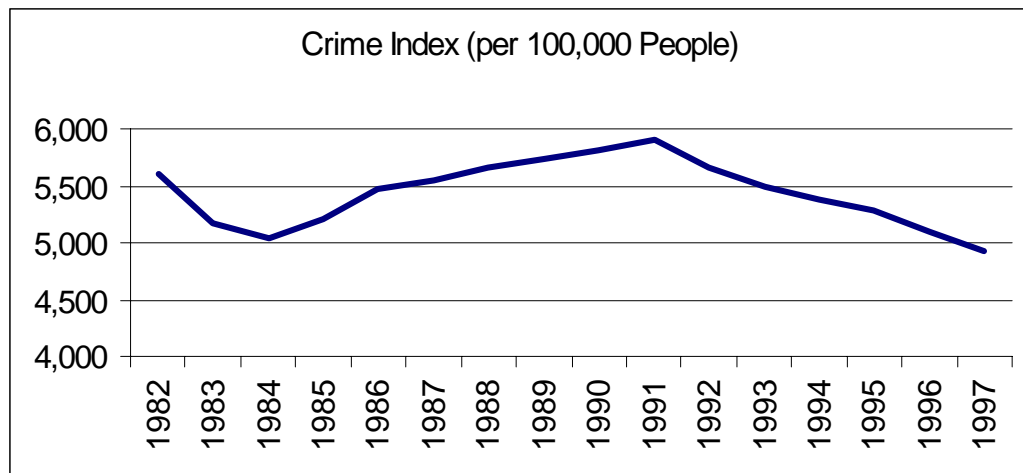


Fig. 1.1b: Even though expenditures for crime control have increased between 1982 and 1997, crime rates in the U.S. have remained relatively stable during the same period.

Source: U.S. Department of Justice. FBI Uniform Crime Reports.

others. Who is responsible for designing these spaces? Mainly architects, planners, and landscape architects. Those professionals designing public spaces should look for adequate solutions that not only are aesthetically pleasing, functional, and financially viable, but also should design consider safety and reducing opportunities for crime.

Important figures in the landscape architectural profession, such as Clarence Stern and Henry Wright, have insisted in the social role of landscape architecture (their housing project in Radburn (1928), New Jersey, is still today, a very valuable example of a design that has taken into account the social needs of people, besides the functional needs). We cannot continue designing in a subjective way when our “client” is the whole society, with special needs, such as safety and crime prevention, to be taken into account. Jan Gehl (1987) reminds us that: “An appreciation of the interaction between the physical design and the social characteristics of housing developments is critical to any security plan”. One basic requirement is the right that every person has to be safe in his own place of residence. Our objective, as designers, should be to find a way to provide a solution that is at the same time attractive to investors and developers, and is in accordance to this social prerogative.

Many theorists have studied the topic of crime prevention through design. Some of them, such as Clare Cooper-Marcus, Jane Jacobs, Oscar Newman, and Jan Gehl among others, have focused their studies on the physical features that promote safety and discourage crime. Others, mainly psychologists and sociologists such as Amos Rapoport, Irwin Altman, and Edward Hall, have shown how the spatial relations of spaces and their physical design can influence human behavior in a positive or negative way. I think both positions are valuable in order to find correct answers in designing safer spaces for our cities.

1.2 STATEMENT OF PROBLEM

Numerous studies have shown that environment, built or natural, affects behavior of people in either a positive or negative way. Gardiner (1978) confirms that: “The design and organization of the physical environment play a key role in providing the opportunities for criminal acts”. We, as designers, should be conscious of the qualities of the environment that produce these effects, and manage them in a positive way in order to create spaces that promote social enhancement and, through it, safer environments. Richard Gardiner gives a very concise explanation of this objective in design:

The basic premise of environmental security is that our urban environment can be designed or redesigned to reduce the opportunities for crime to occur, and at the same time the fear of crime, without resorting to the building of fortresses and the resulting deterioration in the quality of urban life (Gardiner, 1978).

The first step to achieve crime prevention environments is providing the people with adequate places to develop positive social bonds. Safety is the main requirement for people to use a public space. Of course a change of physical qualities of a place that promote crime will not be, by itself, enough to control crime. Social, economical, political and psychological aspects of older neighborhoods experiencing high crime rates

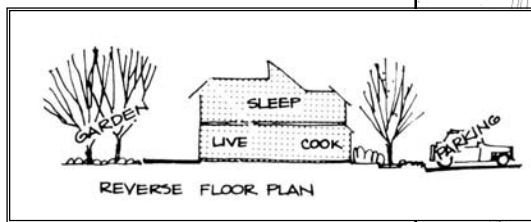


Fig. 1.2c: Basic scheme of houses at Radburn.
Source: Untermann & Small, 1977.



Fig. 1.2a: Radburn, designed in 1928 by Clarence Stern and Henry Wright, has been considered as one of the best examples of a community-oriented neighborhood.
Source: Hill, 2001

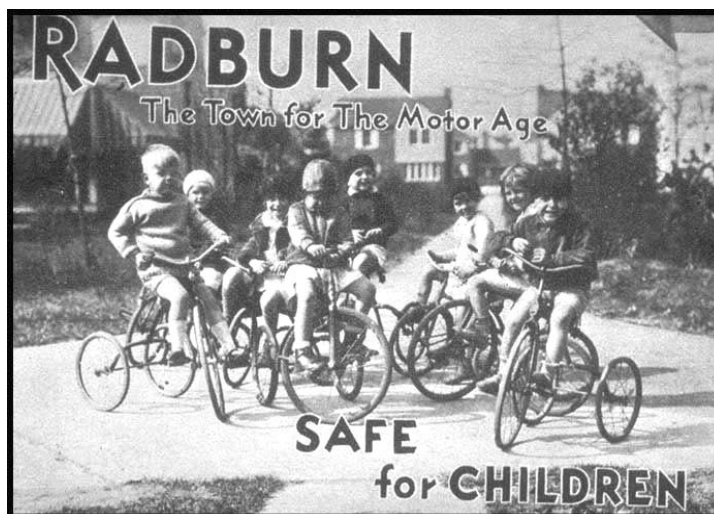


Fig. 1.2b: Promotional poster of Radburn, offering a safe environment for pedestrians.
Source: Hill, 2001

must be analyzed and programs to heal those social structures should be considered, besides physical improvements of the place.

Many sociologists believe that the adequate solution for crime problems must be based on community participation and citizens' involvement with each other and with their environment:

The most important element of community crime-prevention appears to be bring about social interaction, whereby residents of the community maintain a degree of familiarity with each other. Such interaction and familiarity should, in theory at least, make it possible to detect strangers in the community. And finally, crime-prevention theory suggests that such interactions may lead to a cohesive neighborhood. The basic philosophy of community crime-prevention is that social interaction and citizen familiarity can play an important role in preventing, detecting, and reporting criminal behavior (Mukherjee and Wilson, 1987: 2)

This last statement helps to define the main focus of my thesis: to find general guidelines for design of public urban spaces that can be applied to reduce the opportunities for crime to happen and, at the same time, reduce the fear of crime by enhancing and promoting community association and sense of belonging to the place. This could be associated with Oscar Newman's defensible space theory and crime prevention through environmental design (CPTED) set of guidelines. Basically, territoriality, casual surveillance, and reduction of opportunities for crime by elements of the physical design are the main tools presented by these theories. My approach, although is based upon those basic concepts, tends to demonstrate that under the same social and economical conditions, settings designed in such a way as to promote social interaction and identity are least susceptible to be targets of crime than others that do not.

1.3 SCOPE

Numerous researchers (Erving Goffman, Amos Rapoport, and Edward Hall among others) have studied over a long period of time the way in which environment affects humans' behavior. This is a topic that has been object of continuous research since the second half of the last century, at least. Consequently, my thesis won't be directed to prove their theories. Instead, this thesis will present and analyze many of those theories, addressed essentially to landscape architecture, and more specifically, to the issues of landscape design applied to urban public spaces. Then, to support the theories presented, I will describe some specific projects or urban areas in terms related to environmental design and human behavior related to high incidence of crime. Statistical data to determine population characteristics, and police crime reports specific to those areas will be presented as support information to help in the understanding of the mechanisms behind the crime problem in the modern American cities. It is reasonable to consider the fact that physical layout of the place, per se, is not the only factor affecting criminal behavior in a place, but this thesis tends to demonstrate that it is an important element to be considered in the search for solutions to the social problems that are, at the same time, cause and consequence of urban crime.

1.4 OBJECTIVES

The main objective of this thesis is to create consciousness among landscape architects of our function for social improvement. We must address the problem of crime from a different perspective than we usually do, and look for solutions, not relaying on repressive measures, but by an improvement of the physical design and spatial layout of the urban environment. This series of concepts would be useful not only for designers, but for every one involved in the development of cities: politicians, civic leaders, police and other security providers, urban developers, and faculty and students of urban design related fields.

1.5 METHODOLOGY

First, I will present the theoretical background to the topic. This theory review will present different and complementary points of view stated by professionals in design such as Jane Jacobs, Clare Cooper Marcus, Donald Appleyard, Jan Gehl, Oscar Newman—whose theories about *defensible space* have inspired many others to continue his research. Also professionals in sociology and psychology such as Erving Goffman, F.D. Becker, R. Sommer, Robert Sack, P. Sorokin, and others who basically present studies of effects of environment over human behavior.

Second, I will complement this first theoretical presentation with specific facts: census data and other statistics, and police, FBI, and U.S. Department of Justice reports about crime rates, characteristics of crime, and specific location. This information is supported by studies made by criminologists, which help to determine the motivations and nature of crime, and traditional ways to control it. At this point, the information will be narrowed to the city of Orlando, Florida, which is the place I have chosen to do my field research. The information will become specific to this geographic area, looking to get into the basic social and geographic unit in the city, the neighborhood. Not only the neighborhood is important as the area of study because its basic social functioning and physical characteristics, but also because any solution to crime in modern cities would be more effective if there is a commitment of people to combat the problem in their own place of living. There is also in the neighborhood where humans develop their first standards of communal behavior, and should be there where the adults of tomorrow learn to become productive members of society.

Using census data and crime reports as main source of information to determine the social characteristics of the areas to study, I will look for two neighborhoods in the city of Orlando that, even having same population characteristics (income level, and family or social composition), present appreciable differences in crime. Then, taking as a base the theories presented and analyzed in this thesis, I will determine the factors of the physical environment that are contributing to this higher or lower crime activity. At the end of the field study I hope to identify conclusions that will help to confirm or deny the first statement: a place whose physical layout promotes social interaction would have less crime than a place where physical characteristics of the built structure predominantly act as social deterrents and promote basically individuality and isolation.

Third, theories and other information will be synthesized into design guidelines, which will be related specifically to the function of landscape architects and other designers as shapers of cities.

Lastly, I will summarize the most important findings in my research and present general recommendations. Weaknesses of the methods analyzed, will be presented in this chapter to open the possibility to expand the research and develop the system to a more efficient and successful level.

CHAPTER 2. LITERATURE REVIEW

2.1 THE NATURE OF CRIME

Before getting deeper in the theories about crime, let us start with the basics: What is crime? Crime is any act that is prohibited by a law, which also dictates the punishment for the commitment of such an act. In these terms, for crime to exist, there should first exist a law that prohibits it and castigates it. Crime, under this concept, can be considered as a cultural product. Crime is created by society. Any human act is a potential crime. It is by a general consensus or by a rule created by the dominant power that a specific act becomes a crime. In the same way it is created its corresponding punishment. The more unbearable the crime, the more severe its punishment. The more severe the punishment, the greater the fear for being caught committing that unlawful act.

Generally, it is the fear of the punishment has been relied on as the main deterrent of crime. Punishment can be established by human law, by *divine* law, by society, or by an individual. Any person would be discouraged of committing an unlawful act only if he or she ponders its punishment over the personal benefit of committing the crime. As Wilson and Herrnstein explain it: “the net value of non-crime is equal to the value of avoiding legal or social penalties. The greater those costs, the greater the value of not committing the unlawful act” (Wilson, J. Q. and R. J. Herrnstein, 1985).

From the above concepts it is possible to infer the basic components of crime and its prevention: prohibition and punishment. And these are also the elements over which traditionally crime control systems have been structured. Just until relatively recent years government and other institutions in charge of crime control have adopted alternative methods of crime control, from social programs in neighborhoods to specific design guidelines for new developments. The many studies presented by theorists such as Oscar Newman, Clare Cooper-Marcus, and Jane Jacobs among many others have been very influential in this “new” approach to combating crime.

Neither punishment nor prevention can by themselves solve the problem of high crime rates in modern cities. As Jon Bright explains, there are three basic myths in crime prevention:

Myth one: The criminal justice system can prevent crime.

Myth two: Communities can prevent crime.

Myth three: Crime is a single-solution problem.

(Bright 1992: 11).

Regarding to the first myth, Bright mentions how programs to prevent crime are more successful in neighborhoods that are relatively cohesive and homogeneous, generally middle and working-class areas; but those programs are least successful and least common in high-crime, poor neighborhoods, where obviously they are more needed.

Communities by themselves usually struggle trying to get a significant number of people involved in crime prevention programs. It is even more difficult in areas of high-crime, where communities are less cohesive.

Consequently, the most successful programs for crime prevention should be those that consider a multi-solution approach to the problem: Governmental policies,

institutional control, community involvement, public and private investment, and other social programs for control and rehabilitation of offenders.

Some specific facts about crime are practically embraced by people in general as “universal laws” because they have been constantly corroborated by statistical data over time. Some of these facts, as mentioned by Wilson and Herrnstein are:

- Predatory street crimes are most commonly committed by young males.
- Violent crimes are more common in big cities than in small ones.
- High rates of criminality tend to run in families.
- The persons who frequently commit the most serious crimes typically begin their criminal careers at a quite young age.
- Persons who turn out to be criminals usually do not do very well in school.
- Young men who drive recklessly and have many accidents tend to be similar to those who commit crimes.
- Programs designed to rehabilitate high-rate offenders have not been shown to have much success, and those programs that do manage to reduce criminality among certain kind of offenders often increase it among others. (Wilson, J. and Herrnstein. R., 1985)

The truth is that those “facts” must be analyzed within a more ample spectrum, considering social and cultural characteristics of population instead of looking only to the explicit data and the most obvious relations they offer. A simple statement such as “high rates of criminality tend to run in families” just to pick one of the facts listed by Wilson and Herrnstein, cannot be interpreted just as: “persons living with criminals are more likely to be criminals”. It should be considered in terms of the general environment surrounding those individuals and the many different effects that exposure to particular factors can have on them, inducing specific behaviors. Moral aspects, family aspects, economic aspects, cultural aspects, are all important in determining the cause of the criminal behavior. Even aspects not so obvious such as physical characteristics of the setting and its contribution to crime, or the amount of crimes reported to police in relation to the real number of crimes in a specific area.

People tend to associate poverty with high crime in the same way as areas with high number of single-mother’s households, young people, and rented homes are considered less safe than others. This is mainly because statistics tend to confirm those hypotheses. But it does not necessarily mean that poverty inevitably leads people to crime. These are basic facts about crime in the United States:

In 2000:

- Households in rented property experienced 228 overall property crimes per 1,000 households, while those that are owned experienced 153.
- Rented houses were burglarized at rates 85% higher than owned households.

- Persons in households with income less than \$7,500 annually experienced the highest rate of violence of all income categories (60 per 1,000 persons).
 - Per 1,000 persons in each category, 212 black and 173 white households were victims of a property crime overall; 48 black and 29 white households were burglarized.
 - Persons age 12 to 24 sustained violent victimization at rates higher than individuals of all other ages.
 - Persons age 16 to 19 were about twice as likely to be robbed than persons age 25 to 34 and about ten times as likely as persons 65 or older.
 - Those who never married became violent crime victims at more than four times the rate of married persons.
- (U.S. Department of Justice. Bureau of Justice Statistics).

Newman cites two projects, similar in population characteristics (low income residents, most of them black, and many of them in welfare) but with very different conditions of living. The first one, Pruitt-Igoe in St. Louis (see figs. 2.1a and b), with so many problems of crime and dereliction that even with a shortage in low-income housing, big part of the project was vacant; the second one, North Beach, public housing project in San Francisco, with full occupancy at the time the comparison was done, and with appreciably less crime and vandalism (Newman 1975). The main differences between the two projects were related to physical design of public and semi-public spaces that made the St. Louis project more vulnerable to crime than the San Francisco's one.



Fig. 2.1a: Pruitt-Igoe (St. Louis). General view.
Source: East St. Louis Action Research Project web site.



Fig. 2.1b: Demolition was the solution to Pruitt-Igoe's problems of crime.
Source: East St. Louis Action Research Project web site.

Class and race are usually linked to higher or lower crime rates. According to Wilson and Herrnstein (1985), social characteristics cannot be interpreted as causes of high rates of crime; they mention as an example how in the time of the Great Depression in America crime rates were lower than in the prosperous 1960's, and how crime rates are higher now that America certainly has become less racist. Although statistics now show more crime in poorer or minority neighborhoods, crime must be seen as a consequence of other social and psychological factors rather than the result of merely a condition of race or class. The same authors present a study made in Chicago, which found certain areas in the city that retained the same high crime rates even after being populated by completely different social or ethnic groups through different periods of time. The study suggested that "there was something about the neighborhood itself that was more important in determining crime than the people who happened to live there" (Wilson and Herrnstein, 1985: 289). To support that theory, Wilson and Herrnstein mention the words of Niko Tinbergen, Nobel Prize winner and ethologist, who finds crime as a response to four different levels of development:

1. The developmental: How an individual grows up and is socialized by family and friends.
2. The situational: How immediate circumstances, such as opportunities for crime, elicit behavior.
3. The adaptative: How a person responds to the positive and negative rewards of alternative courses of action.

4. The biological: How evolution has equipped a person with certain attributes such as intelligence and temperament.
(Wilson and Herrnstein, 1985).

At least the first three processes could be considered direct causes of the conditions of the environment where the individual grew-up, and do not have to be considered innate characteristics of race or class. This means also that positive actions to change the conditions of those environments would effectively change the behavioral development of certain communities living under negative conditions.

Wilson and Herrnstein said that, when opportunity for committing a crime is presented in front of the would-be offender, he would first have a struggle with his own consciousness, and second he would analyze the chances of being caught. Environment could be managed in a way that affects positively both human responses to crime. In reference to the first response, the environment could be designed to promote the growth of civic consciousness and sense of responsibility, as well as positive actions in benefit of the community. And in reference to the second response, the physical structure of the neighborhood can be designed to communicate to the would-be offender that chances for he or she to be caught are so high that it would be better for him or her not to attempt to commit the offense.

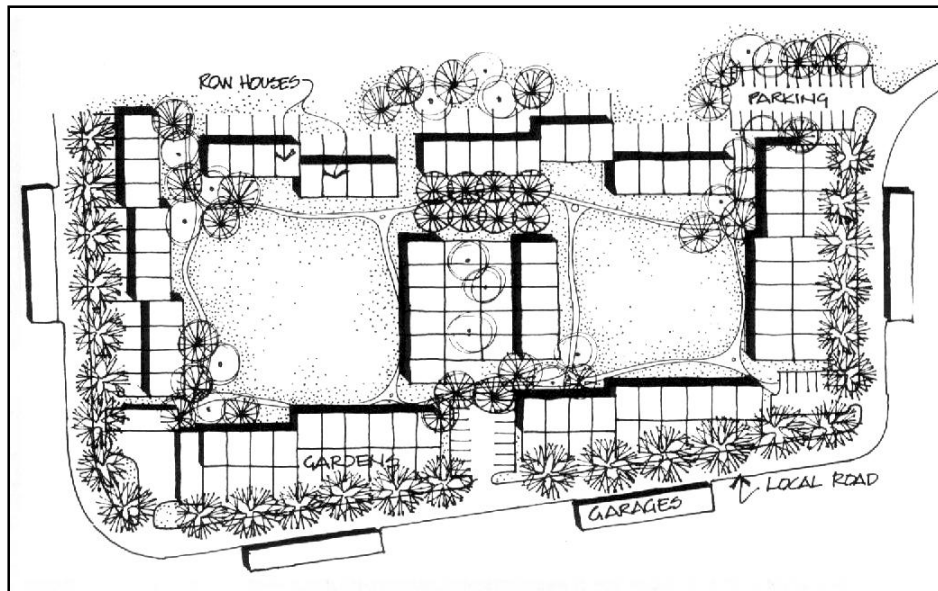


Fig. 2.2: Housing projects where there is a positive control over open areas by residents will effectively discourage criminal acts by outsiders.

Source: Untermann & Small, 1977

In the same order of ideas: “The net value of non crime will equal the value of avoiding any legal penalties (fines or imprisonment) and social costs (family disgrace, lost social esteem, or inability to hold a job). The greater those costs, the greater the value of not committing the crime” (Wilson and Herrnstein, 1985). Criminal offenders are usually people who have very low self-esteem and low appreciation of family and social values. Crime prevention programs must involve a way to make the cost of committing a crime higher than the benefits obtained by committing it. The physical environment would play a part by presenting the offender a premonitory view of the small chances of getting away after committing a crime, or even not presenting any opportunity to easily commit a crime. But civic authorities and government should also implement social programs that promote self and social esteem in areas that are prone to criminal behavior.

Studies presented by Wilson and Herrnstein (1985) made of delinquents in Rhode Island in 1959, showed that criminals are particularly present-oriented persons, this means that for them, past and future are less important than for the rest of the people. In the same way, consequences of their unlawful acts have less importance than they would represent to non-criminals. How could we as designers help to change this perception of time in would-be offenders? One of the causes for this present-oriented time frame, cited by Wilson and Herrnstein, is the high geographical mobility of today’s society. But more than geographical mobility itself, it is the consequences of that mobility: loss of place attachment, weak sense of civic pride, blurred vision of the future and its specific qualities such as place, family, and friends. Consequences of present acts in the future have less importance when future is as anonymous as the present environment in which the person is developing. Well-designed places are places people tend to appreciate; they remind people of the positive values of present life, and offer an optimistic vision of the future.

Crime is not, as sometimes it is assumed, a result of conditions of poverty, or race, or no education; crime is the result of a complex process involving, not only economic, but also social, cultural, and spatial factors. As any other human behavior, crime is developed through the relation between man and his environment, where both affect each other. This process is the topic of the next section.

2.2 ENVIRONMENT AND HUMAN BEHAVIOR

Appleton (1975) has exposed an interesting theory for understanding the relationship between humans and landscape in terms of “primitive” processes that can be traced ages ago. In this sense, the way in which humans respond to landscape is conditioned by “survival mechanisms” present already in our first predecessors, and which now constitute part of our human nature. This theory is also comparable to Jung’s postulates about humans being linked to their primitive past through a “collective unconscious” (Walmsley 1988).

One of these basic “survival mechanisms” is the preference for spaces that permit us to see without being seen (prospect and refuge), as the hunter checking out for his potential prey. This characteristic of human behavior is easily appreciated in any open public space, where people usually prefer to locate themselves at the edges of the space where they can have an open view of other people, but at the same time are not totally exposed to the public’s view (see fig. 2.3). This is only one of many different

characteristics of humans towards the environment that are mainly associated with their “nature”. If we study more deeply the relationship between humans and their environment, we can also induce positive attitudes by managing the characteristics of a specific urban setting. Lets use wild animals’ behavior for example: A clan or a family of a specific species can live in relative harmony, sharing the same territory and its resources. But when an intruder gets into their territory, violent responses are experienced as a way to keep control over the area. Humans are not so different: People need to feel they belong to, but also need to feel they control a territory. In our modern societies people are now forced to experience life in a different way, perceiving themselves more as borrowers of space than owners.



Fig. 2.3: Preference for bordering areas on public spaces can be understood as a natural characteristic of human nature (prospect and refuge).

Source: Rodofsky, 1982.

This provokes two basic responses: one is feeling that no one is responsible for those spaces, or any other is but me. The other would be a conflicting relation between those who think that have the “right” to use the area, and those who want to control it. Conflicts of this type usually come about because of a lack of definition between private, public, and semi-public areas. This ambivalence of public spaces foster criminal acts such as vandalism, personal offenses, conflicts between social groups, and other behaviors related to intents for controlling areas without clear definition of use or users.

Theorists in crime prevention through environmental design promote the implementation of territoriality as an effective way to keep unwanted offenders out of a public access space. Territoriality is part of human nature, and promotes self-defense and solidarity among people of the same community. The opposite case and, consequently, harmful for social functioning would be what is called “no man’s land” or places that have an undefined user or purpose. When a group of people is identified with a specific

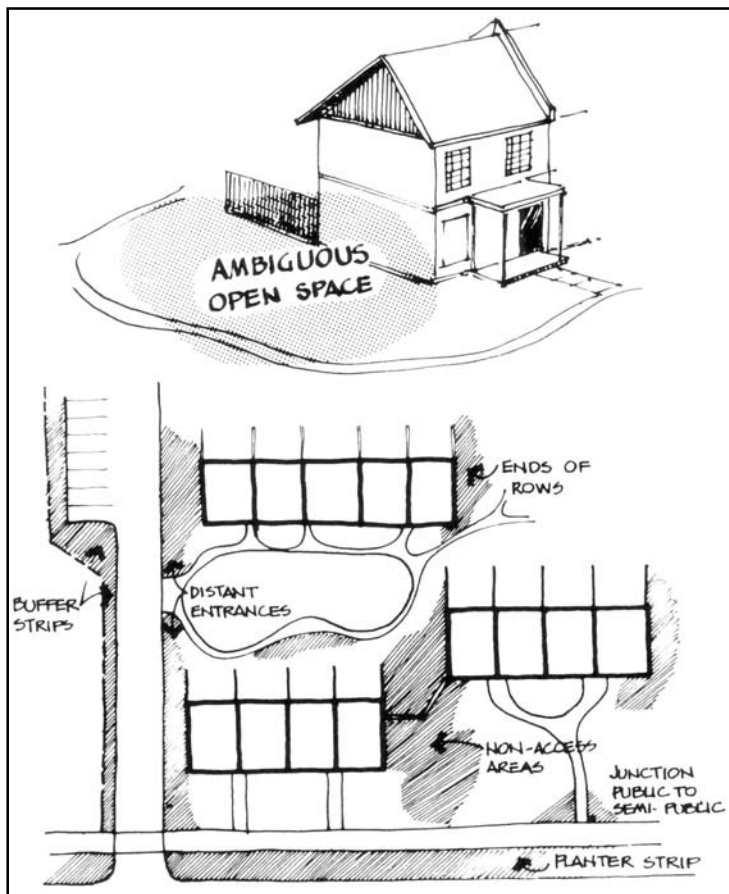


Fig. 2.4: Ambiguous open spaces become potential targets of crime.
Source: Untermann & Small, 1977.

place and feel responsible for it, they would be more likely to protect that territory against any act of vandalism or other undesirable behavior.

But territoriality is also used in a negative way by outlaws such as gang members, who get into violent fights just to defend their territory, and who are willing to attack criminally to any other person inside their boundaries. This negative type of territorial behavior is mainly product of unplanned or badly planned urban open spaces, that let areas undefined, unassigned to a specific group or use.

The difference in the two cases is determined by personal, social, and moral values, and for the essential motivation for creating particular territories. Territoriality can also be negative when residents of depressed areas perceive any visitor as either a potential enemy (a “spy” of the authorities, or a morbid curious one) or a potential victim. Nevertheless, even this kind of negative sense of territoriality could be changed into a positive aspect with some guidance and social programs. Once territory is defined and people have accepted their existence, which is the hardest sense to develop among residents, attitudes towards defending it could be transformed into positive motivations. In reference to this dilemma in design, defining if territorial possession is a good or a bad thing for communities, Deasy proposes:

Designers might wish that people did not feel so strongly about their territorial rights, real or assumed; life would be simpler in some ways if people were more inclined to share territories. Such thoughts are not very realistic, however as territoriality is a strong sentiment in most societies and is not likely to disappear in the foreseeable future. By understanding the nature of this feeling, designers can both minimize the friction that results from territorial disputes and maximize its potential benefits (Deasy, 1985: 28).

As bad as the conflicts aroused from ambivalence in the use of public space is the isolation of communities and loss of contact with other social groups. Those symbolic or real barriers that divide communities are in many cases related to aspects of economic and cultural nature. Oscar Newman mentions that for the lower-class person, everyday contacts with others “reinforce his feelings of impotence, erode his self-confidence and make remote any possibility of improving the quality of his life” (Newman, 1973b). This affirmation is really objectionable. For a person who is living in bad conditions, daily contacts with other people who enjoy a better life could remind him of his precarious condition and feel petty about himself. But it does not necessarily mean that no contacts with other people would be a better option. What I consider is important for a low-income person is to improve his self-esteem by sharing with others his own moral and intellectual values, helping others and him-self by actions in benefit of his neighborhood, developing in this way his self-reliance and social sense; it becomes a motive for improving neighbors association and a reason for caring for their environment.

In order to design an effective urban space that promotes social life, it is necessary to understand the basics of human perception of the environment. Edward T. Hall illustrates part of these aspects of the human nature:

- Social field of vision (0-100 feet): At 100 feet figures can be still perceived as social individuals. At 90 feet people can differentiate facial features, hairstyle and age. At 60 to 75 feet it is possible to distinguish moods or feelings of others. Conversations usually develop between 1 and 3 feet.
 - Intimate distance (0 to 1 foot and a half): Intense feelings are expressed: love, anger, tenderness, etc.
 - Personal distance (1 ½ feet to 4 ½ feet): This is the distance we share with close friends and relatives.
 - Social distance (4 ½ feet to 12 feet): It is the normal conversation distance.
 - Public Distance (More than 12 feet): Formal situations and public events
- (Hall, 1966).

In conclusion, depending of our intention as designers to promote relations between people, physical elements in design can be adjusted to specific distances, in accordance to the human nature. For example, social distance, which is considered up to 100', sets a limit in order to create spaces that would offer effective possibilities for

casual encounters and social situations. Social interaction is a process that evolves over time, crossing through different levels or degrees of interaction, and the public spaces should offer the appropriate setting to foster each of those levels of interaction. This type of layouts would permit an easier development of social ties, and promote the use of public spaces.

Humans have a vital need for stimulation (Gehl, 1987). When people do not have opportunities for positive stimulation, they would probably look for negative ways to fulfill that natural need; this could be a possible explanation to those crimes that are committed only for the pleasure resulting of doing it, not for any monetary reward. Modern cities, compartmented and specialized, devoid residents of chances for stimulation. Cities designed for the automobile and the demanding and competitive modern life style do not leave many chances for experiencing urban milieu in a positive way. But even with a type of life like today's, designers should always look for options to create spaces that stimulate intellectual and physical activities, promote the use of outdoor spaces, and minimize the negative consequences of a dull and monotonous life.

Gehl mentions that in Copenhagen, after improvement of pedestrian streets and plazas, the quantity of people using them increased 3 times. This study was done between 1968 and 1986. Although Gehl does not mention how much the population in Copenhagen increased during that period of time, it is still a valid proof that designers can make a positive change in people's behavior towards their own environment, and consequently, in their social relations.

One of the activities that attract people to public areas the most is just watching other people (see fig. 2.5). In the same way, places with high social activity call for more people than those areas with low activity or no activity at all. For these reason, public spaces work better when they are linked to casual circulation of people. As Gehl mentions: "If something happens, something happens; if nothing happens, nothing happens" (1987). What this means is that places with some activity going on will continue attracting more people that places with no activity at all, which tend to inhibit people from entering.



Fig. 2.5: Watching other people is one of the main activities in public spaces. Source: Whyte, 1980.

Children are an important element in the process of socialization in communities. They are natural catalysts for relations and interaction of adults in neighborhoods. Children are sociable, and playgrounds are places that offer opportunities for social encounters in a positive environment. The best way to start a program of renovation of social values in a community is to focus it to the interaction of children. They are also the age group that is more deeply affected by the environment (Gehl, 1987: 109). Playgrounds and other facilities promoting children-oriented social encounters and first inter-personal relations should be a requirement in any new development. Positive values learned at early age, such as respect for others, camaraderie, and knowledge of society rules are to be carried until later in adult life.

Another age group that is critical to address in order to prevent crime in our cities is teenagers. It is known that more than 50% of juvenile crime is committed in groups (Wilson and Herrnstein, 1985), which is a clear indicator of the big influence of peers in youths' behavior. Theories to explain why youths are so easily attracted to commit unlawful acts are cited by Wilson and Herrnstein:

Peers supply a young person with values conducive to crime, reinforce core values of lower class culture, satisfy need of males to prove their manhood, and in violent gangs: stimulus for unstable, sociopathic personalities (Wilson and Herrnstein, 1985).

Vandalism is a type of crime that is mainly committed by young people (Jakle & Wilson, 1992); and it is also a type of crime that is committed by groups rather than individuals. Looking at it from a positive analytical perspective, these aspects put together basically indicate that young people have first a need for activities to channel their high levels of energy, and second that they also have a strong need for association with their peers. I believe the best way to prevent this type of crime would be provide their areas of residence with places of encounter and socialization, which should also offer alternative ways to use their energy in a positive way, making sure not to create conflicts with adjoining neighbors.

Wilson and Herrnstein (1985) mention an experiment of behavioral conditioning: the "Pavlov's dog" experiment. It consisted in sounding a buzzer each time the dog was going to receive a piece of meat. Later on, the mere sound of the buzzer would make the dog salivates. In the same way humans respond to some environments according to the conditioning they have been exposed to throughout their lives. A positive environment is usually associated with positive experiences in life, a negative one, with bad experiences. Good environments can act positively in people's behavior, as the Pavlov's dog buzzer, reminding people of the benefits of living in peace and harmony. But first, we must provide the spaces and the opportunities for the new generations to form positives attitudes toward life, and act accordingly later in their adulthood.

Louise Chawla (1992: 66) says that healthy place attachment "balance the inward hold of an intimate familiar center with the outward attractions of an expanding world". It is in childhood and adolescence when humans form their social patterns of behavior. In early childhood the public sphere is limited basically to the closest street and playground; it is at this stage when a healthy relation with the environment creates a sense of the society's goodness (Chawla, 1992: 67). In middle childhood (6 to 11 years), most of the

public places frequented are those close to home, inside the neighborhood to the child's residence. There is a sense of exploration, which also includes a more developed interaction with the environment. These aspects are considered a preparation to the social interaction of the adolescence years and the search for self-identity. This reinforces the importance of a positive environment in the formative years of a child, an environment which promotes the values of communal life.

Since most predatory street crimes are committed by young males, and that the most serious criminals usually start their delinquent life at young age (Wilson and Herrnstein, 1985), designing spaces for young people where they can enjoy and cultivate positive social values is a prerogative for decreasing crime in urban places. Kevin Lynch mentions that attachment to a place depends on simple spatial rights: right of presence, right of use or action, right of appropriation, right of modification, and right of disposition (Lynch, 1981). He also noted that in young people, enjoyment of those rights is tied to adults' tolerance or ignorance of their activities. This means that developing a sense of independence in young people is a very important element in their exploration and discovery of the environment. But this need for independence cannot be confused with isolation and anarchy. Young people need space of their own, where they can experience the responsibility of their own acts, but it is always a requirement for their healthy development to expose them to other members of the society, to feel part of it, and share the benefits of living in a community as well as be conscious of their obligations and norms of behavior.

Public spaces designed for the use of youths must offer some degree of control by other members of community, without violating their rights for independence. This is a hard requirement to fulfill, requiring considerably creativity to create places where group socialization and independence work in harmony. Public spaces for the youth should allow possibilities for social and cultural interchange with other members of the community so they can develop their sense of association and solidarity; but at the same time those spaces should offer some independence and freedom to feel and enjoy of their group identity, and to promote creativity and self-expression.

Barbara Brown and Douglas Perkins (1992), talking about disruptions in place attachment, mention that in the same way as people change through time, attachment people feel about some places also changes. Attachment to a place can be eroded if it does not give opportunities to people to re-create it, and re-adapt it to new needs. Even though places should offer possibilities of being changed and re-adapted to users' needs, excessive or uncontrolled change can result in chaos (Brown & Perkins, 1992: 282). The virtue of the designer is to balance those two requisites in community spaces, to be able to accept changes, to permit community self-expression, and to be a structure rigid enough to keep its basic organizational scheme and functional essence through out changes.

Humans sometimes need of what Erving Goffman called "role release" (Goffman, 1963), which is basically escaping for a while of the impositions and norms that society and authorities impose over us. Some spaces with certain characteristics can induce this behavior, usually unsupervised public spaces, dark areas, and places without people clearly assigned to them or without a specific purpose (no man's land). Goffman mentions a case in reference to this human trait: in certain hospital nurses were not allowed to smoke inside the facilities; in spite of this prohibition, they used to smoke in a

tunnel joining two areas of the complex. The physical characteristics of this tunnel gave nurses an opportunity for role release. In a similar way, cities offer spaces with the same physical and symbolic qualities of the tunnel in the example. To discourage role release behaviors it could be considered either repressive measures, as forcing people to obey rules, which obviously would demand the presence of law enforcers in the place at all times; or preventive measures, changing the physical characteristics of the place that make it a place with a greater potential for committing acts against the law.

Designing places to discourage crime usually gives high importance to casual surveillance of public space, either by residents around or by casual users. Goffman (1963) confirms the importance of what Jane Jacobs used to call “eyes on the street” as a way to deter crime. He explains that: “when in presence of others, the individual is guided by a special set of rules, which have here been called situational properties... These rules prove to govern the allocation of the individual’s involvement within the situation, as expressed through a conventionalized idiom of behavioral cues” (Goffman, 1963: 243). People’s presence in a place is important not only because it is a control for misbehavior but also because it is a way to promote individual’s involvement with society: “the individual will find, then, that every participation in a social situation will represent one sense of what is meant by personal attachment” (Goffman, 1963: 244). And through the process of personal attachment individuals become identified with a bigger entity, a social group “with a boundary and a life substance of its own” (Goffman 1963: 244).

Edward Hall defines as *Proxemics* the man’s perception of the social and personal spaces (Hall, 1966: 4). Understanding human perception of the social environment is an issue of prime importance in designing spaces for people, as a way to reduce the probabilities for conflicts and to promote socialization, two important factors in the task of preventing crime in neighborhoods. *Proxemics* is a part of what Hall called “The Cultural Dimension”, a dimension in which man and environment influence mutually. Designers of the urban space must be conscious of the existence of this dimension, and the constant interaction between humans and environment.

Humans and animals share some natural attitudes toward the environment and the way in which they interact with others. In “The Hidden Dimension” Edward Hall describes the three main spatial fields perceived by animals and how they influence their behavior:

- Fight distance: A wild animal will allow man or other potential enemy to approach only up to a given distance before it flees... There is a positive correlation between the size of an animal and its flight distance. The larger the animal, the greater the distance it must keep between itself and the enemy.
- Critical distance: The narrow zone separating flight distance from attack distance. A lion in a zoo will flee from an approaching man until it meets an insurmountable barrier. If the man continues the approach, he soon penetrates the lion’s critical distance, at which point the cornered lion reverses direction and begins slowly to stalk the man.
- Social distance: Social animals need to stay in touch with each other. Loss of contact with the group can be fatal for a variety of reasons

including exposure to predators...It is rather a psychological distance, one at which the animal apparently begins to feel anxious when he exceeds its limits. We can think of it as a hidden band that contains the group (Hall, 1966: 10-13).

Relating these animal qualities to human behavior could be useful to identify specific requirements to be considered in the design of public places: First, territoriality is an innate condition and is determined by a need of having control over personal or group's space; territory, Hall notes, is an "extension of the organism". Second, when others penetrate the territory, the first attitude to arise would be questioning for their presence, and after that a probable confrontation could occur. Third, the size of the territory depends on the size of the group. And fourth, loss of touch among members of a social group can result in problems both for the individual and for the group itself.

Two important theorists, Cooley (1920) and Mead (1934) made a differentiation between what the person is (the "I") and the person's perception of him or herself, as another being (the "me"); it is basically a differentiation between the "object", the original being, and the "subject", which is the result of an interaction with its surrounding social and physical environment. Mead named this process "Symbolic Interaction", and the perception of its result by the individual is denominated by Cooley as "the looking glass self". Both theories are useful to illustrate that humans are constantly being shaped by the environment, and that they consciously or unconsciously perceive the effects of this interaction with environment. Also, this denotes the importance of a positive interrelation between humans and their physical and social container.

Much of the humans' set of behaviors is influenced by signs communicated by the environment. Physical characteristics of the place act as cues that define the appropriate behavior to be followed in that specific place: "the subject reads the cues, identifies the situation and the context, and acts accordingly" (Rapoport, 1982: 56). Real or suggested signs can be incorporated in the place to guide the people's acts and to deter undesirable behaviors. The condition for this type of communication is that users interpret signs in the same way as the designer does. Because people usually interpret environments based on their previous experiences on life, signs can be ambivalent in their meaning. Blumer (1969) describes this process as *Symbolic Interactionism*:

First, human beings act towards things (both objects and people) on the basis of the meanings which these have for them.

Second, the meanings of things are derived from, or arise out of, the social interaction process. This is claimed to be specific to symbolic interactionism.

Third, These meanings are handled in, and modified through an interpretative process used by people in dealing with the things which they encounter.

Meaning is thus not intrinsic and interpretation plays a critical role. (Blumer 1969).

Rapoport (1988) makes a differentiation between *Signs* and *Symbols*: Signs are univocal, only have one proper meaning. Symbols are multivocal, they can be interpreted

in different ways, according to people's social and cultural backgrounds. The condition to induce norms of behavior by physical design of public spaces would be therefore to use elements in the setting that act as signs rather than symbols, whose interpretation is clear and shared by most of the people, as universal rules of behavior.

Humans develop their social characteristics under the influence of the environment where they grow up or, as some researchers (such as Walmsley and Appleton) affirm, where their ancestors grew up. This affirmation presents other possible interpretation of crime nature, the interpretation of crime as a phenomenon linked to values developed throughout the consolidation of cultures. The next section is intended to analyze the relation of crime and specific cultural characteristics of society.

2.3 THE CULTURAL APPROACH

For a community to become an effective defense against criminal acts in its setting, first there should exist an effective attachment to the place and a sense of belonging to the social and the physical milieus. For this to occur it is essential that people feel identified with the place they live in. Ties of this kind are only developed through time and experiences. This is a very difficult and progressively least probable process to develop in Modern America, where high mobility and individualism are two main characteristics of its people. American cities are usually characterized by lack of cultural cohesion or unity, which at the same time keep landscapes devoid of special significance or meaning (Walmsley, D.J., 1988).

As an ideal, community has received short shrift in America. Certainly, the inclination to move constantly in search of economic opportunity has undermined community (Zelinsky, 1975).

If a social group does not feel responsible for its particular setting, if this particular place is considered temporary, no one would really care about keeping or improving the qualities of the space. Mobility, as I mentioned before, is a characteristic of many Americans, as it is also the ephemeral aspect of goods, buildings, neighborhoods, and public places. It is common to see buildings built 20 years ago, or even less, being demolished, just because they were "too old", to be replaced for new developments. This attitude produces a constant process of "re-construction" of cities, leaving few chances for old urban spaces and structures to remain long enough to become part of the collective memory, to be cherished as significant places, and to incite in dwellers the urge of protecting them against factors that could deteriorate traditional and appreciated qualities.

Certainly, community networks are more complex now than before. After the industrial revolution new social processes such as individualism and cultural redefinitions (due to migration from rural to urban zones, and from one country to another) produced a breakdown in society. This does not necessarily mean that community life is gradually disappearing, but it creates a new challenge in urban design, it is the urban planners and designers who must redefine old concepts of ideal cities and create habitats to accommodate multi-cultural societies compelled to share the same territory.

Characteristics that differentiate cultures are complex to understand, precisely because of the variable interpretations each culture can get from the same cultural trait. For this reason, particular cultural aspects should be carefully studied in order to design places that fulfill the people's expectations and generate a sense of civic pride among dwellers in those areas. D.J. Walmsley (1988) mentions a study that demonstrates that Chinese people, who usually are very well adapted to high density in their original habitat, are badly affected by overcrowding in some San Francisco areas. This shows that sometimes the people's expectations can override cultural values. The last example is a common characteristic of immigrant groups in America, who came to this land with high expectations about their future, changing in this way their original cultural standards of living. Satisfaction with the place of residence is a primordial aspect for creating sense of territoriality among people, which would act as a crime deterrent, according to theories of environmental design.

America's actual reality is of a nation with multiple ethnic and cultural values. It has been proven for different studies that America is not a "Melting Pot" of cultures as some theorists have usually described this country; it is rather a "mosaic" where each individual ethnic group conserves its cultural values through many generations (Hall, 1966: 156). In designing urban spaces, the ideal situation would be that the built environment responded to the cultural expectations of every particular group, in order to obtain the highest degree of satisfaction with the place, and which promotes positive attitudes in dwellers, including feeling responsible for their own environment. In the real life, it would be practically impossible to design a place responding to every particular demand of each of the cultural groups that would share the same setting. As I see it, there would be basically two options to answer to this dilemma: first, designing many different sub-spaces according to each individual group's requirements; and second, designing a space which is not related to particular requirements of any specific cultural group, but which is easily adaptable to common demands of any of those groups, as an ambiguous space that is in accordance to universal values of social life and personal development (see fig. 2.6).

Designing residential areas without considering the cultural and social characteristics of future dwellers can result in a disruption of the mechanisms that could tie a community together. Failing to consider cultural and social needs could create conflicts inside a group, with consequences that could affect the whole urban network. A good example is cited by Marris (1961): the Yuruba, a community from Nigeria, traditionally organize their dwellings around a common hall or corridor, which leads to a semi-private yard used for cooking, working, as a storage, and for other communal activities. British planners ignored those cultural characteristics when they designed a new dwelling complex for the community. They built better furnished homes, with more commodities, but changed the traditional urban structure, and consequently, disrupted the typical social mechanism. People were unhappy living there, even with all the upgrades, and different problems of social order arouse among the community members (Marris, 1961).

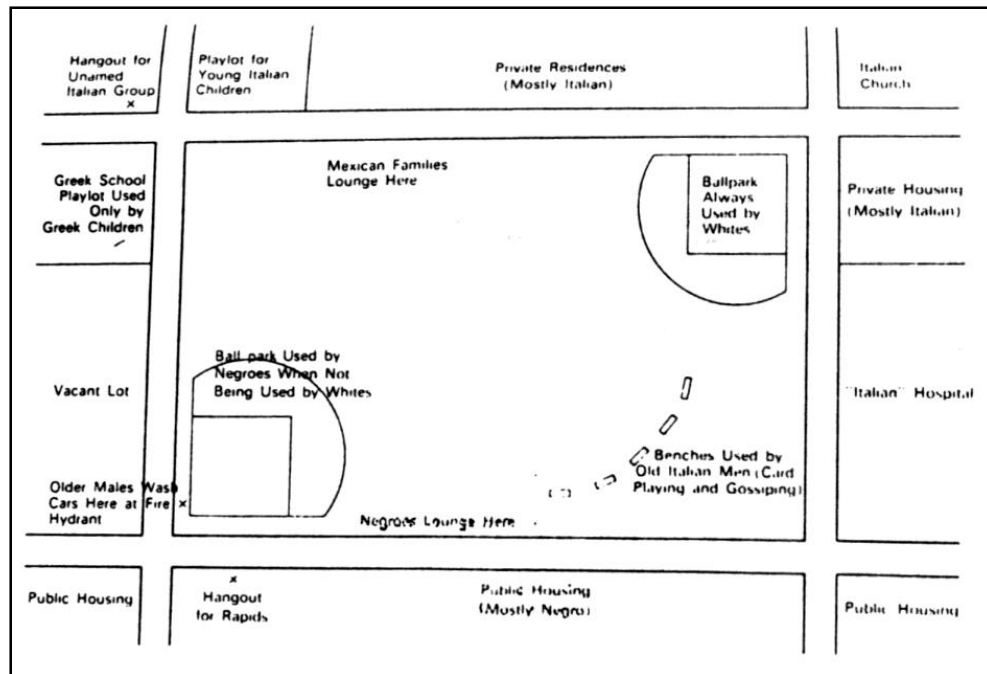


Fig. 2.6: Different cultural groups sharing the same public space.
Source: Suttles, 1968.

Rapoport mentions that cultural groups can be distinguished by their different perception and use of time, among all the other obvious differences. Dissimilar rhythms can originate conflicts among cultural groups sharing the same setting: “cultural conflicts and problems may often be more severe at the temporal level than at the spatial, although clearly spatial and temporal aspects interact and influence one another” (Rapoport, 1982: 180). Differences in the perception and use of time between different cultures could be used as a positive factor instead of being a reason for conflict: with an appropriate planning program, temporal differences can be a mechanism to enhance use of public spaces, during extended periods of time. Extended periods of use would guarantee more presence of people on streets and public centers, acting as crime deterrents and promoting community identification.

Even with the accelerated change in the original cultural structure in America over the last years, and the marked influences of other ethnic and social groups, American culture is still one of the most notorious examples of an individualistic culture. This characteristic is enhanced by deeply rooted ideals of what America represents for its citizens: freedom, independence, personal rights, self-improvement over social values, self-expression, personal success, the American dream, land of opportunities, and the paradise for those who fight for their personal dreams.

With so much individualistic thinking assumed as part of this culture, it is really hard to think in good ways to convince people of the benefits of community life and to set social priorities over personal interests –which tend to be associated to Socialism, and consequently, with Communism (forbidden thinking in America). Explaining the individualism in American culture, Jakle and Wilson wrote:

Self-improvement has been a primarily motivating force in American history. Personal aggrandizement, whether for basic sustenance, safety, health, wealth, or religious fulfillment, propelled a largely European population to North America over nearly four centuries. Opportunity has been the byword...Although individuals formed communities to achieve their goals, the central idea was one of improving oneself as an individual...Community, on the other hand, has been valued primarily as nurturing circumstance in proportion to an individual's, a family's, or, more recently, a corporation ability to succeed (Jakle & Wilson, 1992).

Over any social values, the main American principle: Freedom, which is a very valuable moral aspect, tends to affect negatively the formation of social systems in urban centers. Just looking at modern neighborhoods, with isolated houses, lacking communal spaces, it is evident the fact that interactive social life is no longer a main premise in urban neighborhoods design. It is easier in American cities to meet our neighbors in the mall, or in the supermarket, rather than on a street close to home.



Fig. 2.7: Urban sprawl, a reflection of American individualistic culture, affects social interaction in new neighborhoods.
Source: Planners Web.

Americans are usually considered as a “non-contact” culture. Compared to other cultural groups such as Latinos and Arabs (Walmsley, 1988). This also means that Americans are less tolerant of high-density type of living, thus the plethora of low-density urban sprawl. Taking in consideration that America is now a highly diverse society in terms of cultural composition, social and cultural differences of groups living close to each other, can lead to internal conflicts between neighbors. So, which is the correct way to design neighborhoods for this new society? Cultural differences may be attenuated through design, using the positive qualities of each culture to create a diverse,

rich, and educative urban experience for all the members of the community. Neighborhoods should offer opportunities for privacy for those who want it, and places for social activity and cultural interaction, as well. The better the place satisfies the social needs of dwellers, the stronger their sense of affiliation to the place, leading consequently to formation of attitudes of responsibility. As this happens, neighbors become the main defenders of their own setting against most acts that could affect the conditions of an enjoyable living, such as crime and dereliction.

Some aspects of the American culture are usually related to low levels of attachment to the place of residence. Rivlin (1987: 11) mentions high mobility as one of those factors affecting attachment to place. He also presents studies that show that many adults in America consider their actual home as a transitional stage between the paternal home and the expected definitive home (the dreamed home). Attachment to place is something developed through time and experiences. That inter-relation and identification with the place make residents adopt an active role in protecting and caring for their physical setting. Some studies of the elderly show that old people consider the changes to the places where they grew-up, raised their children, and had their most memorable life experiences as a loss of a personal possession. (Rivlin, 1987: 12).

No one can deny that one of the best things about America is its strong economy, which permits families to get a house in middle of a big yard, a big house with many rooms, one for each member of the family, where they can grow-up experiencing the feelings of independence. Is anything wrong in that picture-perfect way of life? Well, Tarrant (1976) presents a different point of view to that dreamed type of living. For him, this situation produces a distancing of individuals from their community. This distancing process basically begins since childhood, when kids have a premature autonomy from parents and other members of the family, a basic attitude encouraged by their parents, as a way to preserve the most cherished American concept: Freedom.

The culture of the automobile, the fast life, the comfort of homes with artificially-controlled-climate are all factors that contribute to isolation of individuals from the social group they belong to. New advances in technology and telecommunications have come to aggravate this phenomenon. It is for this reason that we need today, more than in any other time, environments that promote communal enhancement and inter-personal relations.

The formation of bonds with the place requires, therefore, conserving the original basic structure of places, so people would be able to recognize them and feel identified with those places. Also, allowing and encouraging the celebration of different symbolic acts that reaffirms the concepts of community and promote social encounters. Rites are important element in every culture and a mechanism to create strong bonds among members of the group and with their land. Celebrations of this type will be remembered in conjunction to the place where they took place. In that way both place and event would be linked in the same cherished memories and will be assimilated as part of the strongest cultural values.

2.4 LANDSCAPE AND COMMUNITY

Community is one of those terms that usually can be interpreted in a wide range of ways, implying a wide range of scales. Basically, community could be defined as a

group of people who share some common interest, and act according to a set of formal or informal rules, commonly embraced. The more complex the community the wider the code of rules is. Their members may share the same physical setting for a relatively short period of time, or for their lifetimes, but in any case a sense of belonging to the group should always be a characteristic of their members.

Landscape and community affects each other in a reciprocal way, communities adapt the physical environment to their specific needs, and landscape influences different sets of behaviors and shape specific characteristics of people living in it. One of the community's qualities that are greatly influenced by the environment is the force or ties that keep its members together. If the place does not provide dwellers with physical spaces that allow casual encounters, chances to develop communal life would be scarce, and consequently, ties that bind individuals together would be weak.

Neighborhoods where dwellers interact and share common interests are potentially least prone to crime than others without social interaction. This is now understood by governmental and police authorities, which actually lead and promote many social programs to strengthen community links. Programs such as "Neighborhood Watch" and "Neighbors Associations" are increasing in American cities as a way to deter crime.

The main point of the Oscar Newman's theories (Newman, 1972) was not just to combat crime through design elements; it was to create environments that will promote civic interaction, community pride, and consequently willingness to control any act that could affect the quality of life in their own neighborhoods, such as acts of crime. This implies basically an image of communities defending themselves and their territory against outside dangers.

Critics of Newman's theories use this last interpretation to expose it as a failure of his thesis. They point out that main elements of crime prevention through design such as territoriality and public surveillance won't work in areas where their residents are those who actually act against the law. Of course in areas with these characteristics it is harder to develop a sense of community pride, because it has been deeply eroded by other factors such as lack of investment and community rehabilitation programs, mainly lack of opportunities for people to improve their living standards. In these cases environmental design programs need to be supported by other type of social programs in order to work.

Much of the help for the recovery of these neighborhoods should be responsibility of governmental agencies and other civic authorities. Neighbors' participation in social programs would be easier to obtain after they have noticed that their city authorities really care about them and their place. Physical design improvements are to be considered a complementary help to discourage some types of crime. As Perlmut mentions (1982), to create environments that are least crime prone, it is necessary not only the work of planners, but also the participation of residents in determining the basic needs, and the relations between different areas and users.

New advances in technology, mainly in telecommunications, have deteriorated the traditional ways of social interaction. This cybernetic age has broken barriers of space bringing individuals in close contact to each other at a global scale, but simultaneously breaking down the simpler relations among neighbors, which now isolate themselves into their own homes to travel many miles through the electronic corridors to get in contact with new electronic pals.

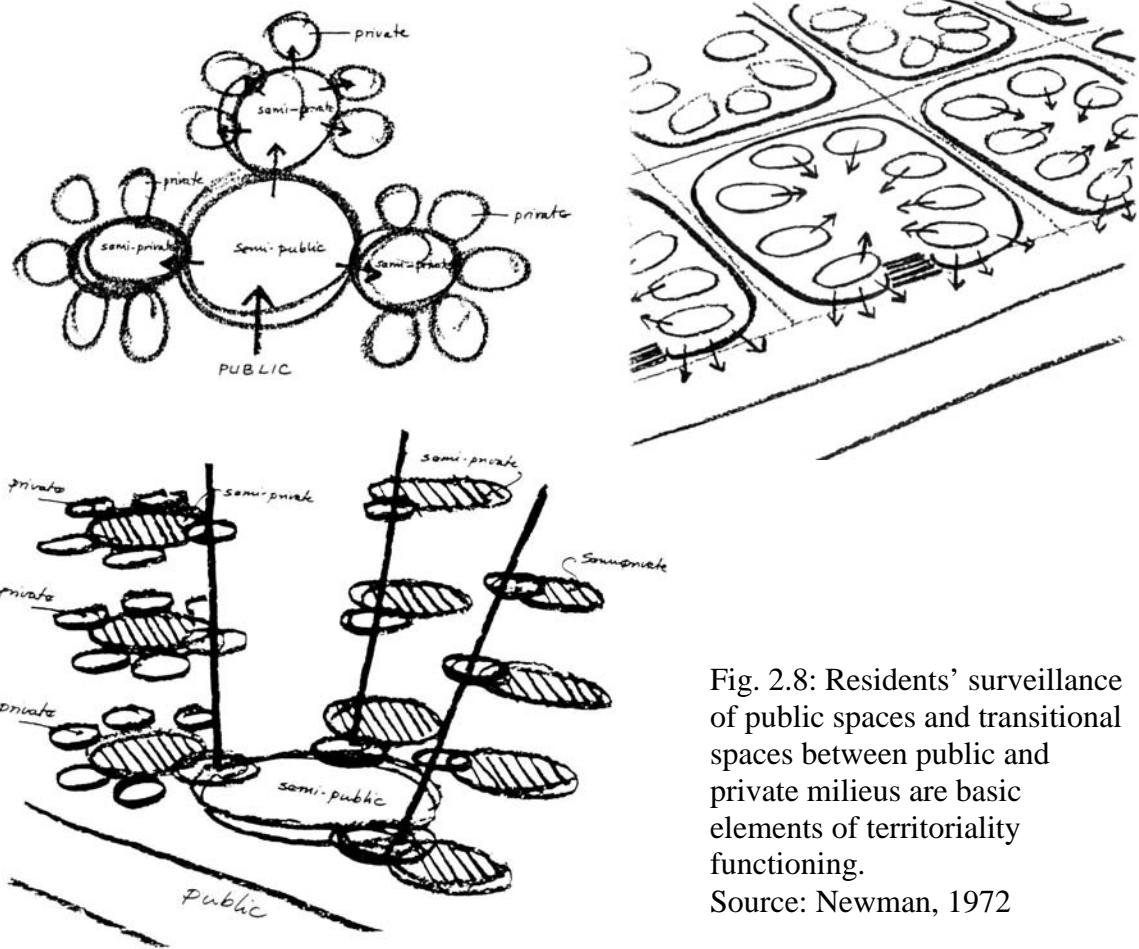


Fig. 2.8: Residents' surveillance of public spaces and transitional spaces between public and private milieus are basic elements of territoriality functioning.
Source: Newman, 1972

In modern times, the concept of community has become more complex and less related with physical proximity. People are now able to develop social ties with other persons without even moving away from their home computer. Less people in the streets and parks means places without casual surveillance. Therefore, these spaces are potential targets for delinquency and vandalism; even worst, these communities loss their cohesiveness and became diffuse.

Jukle & Wilson explains this new concept of community associations based on other means of interrelation but physical proximity:

The German word *Gemeinschaft* applies to the first type: the traditional, territorially based community valued by Jane Jacobs. Place is primarily...In many places mobility has overcome the dependency of such based social networks. The second community type termed *Gesellschaft*, refers to this new aerial form. In their separateness, individuals profess community loyalties for purposes of self-interest...Modern communities attract participants by offering rewards and gratifications (Jakle & Wilson, 1992).

Both types of community associations offer some kind of gratification to their participants. In the last type, the symbol of association and fidelity is abstract, based on individual performance and subjective perception of the real purpose that keep people together. In the traditional, place-based type of community, the symbol of people's union is the setting they share and that becomes of significant importance and acquires a tacit social value. Additionally, when community values are passed from one generation to another, the ties between members of the group and with the place are progressively strengthen.

For kids in particular their place of residence represents their world and consequently is the most cherished. It is the place to play and to form their first social ties outside of their family nucleus. Kids playing at school or at private clubs would develop their personal sense of social interaction but, different from the neighborhood based play activities, they would not develop a sense of identity with their place of residence.

Considering that neighbors' participation is of prime importance to deter crime, it must be a basic condition in any neighborhood to provide spaces where children can have the chance to interact with their neighbors, and to begin forming a sentimental tie with their particular setting. Unfortunately, the modern American neighborhood is neglecting this important element and not providing places for communal participation and interaction. Oscar Newman expresses the same preoccupation in the next paragraph:

In our newly created dense and anonymous residential environment, we maybe are raising generations of young people who are totally lacking of any experience of collective space, and by extension, of community rights and the shared values of society (Newman, 1973).



Fig. 2.9: Parks located on the borders of neighborhoods are hardly used by residents and become targets of criminals.

Yi-Fu Tuan presents us a very illustrative description of the importance of the first encounter of children with their surrounding:

It is difficult for an adult to recapture the vividness of sense impressions that he has lost (except occasionally) as in the freshness of a view after the rain, the sharp fragrance of coffee before breakfast when the blood-sugar concentration is low...A child, from about seven or eight year-old to his early teens, lives in this vivid world most of the time...He has much of the adult's conceptual ability. He can see the landscape as a segment of artfully arranged reality "out there," but he also knows it as an enveloping, penetrating presence, a force. Unburdened by world cares, unfettered by learning, free of ingrained habit, negligent of time, the child is open to the world (Tuan, 1974).

All of the information we receive in our childhood is what is going to determine basically our performance as adults. Those years are going to be also our most cherished memories, which are constituted by people and places we learned to appreciate in our childhood. Much of the significance any given place has for us comes from a subjective appreciation of it based on our personal experiences. If a person is sensible to his or her environment, how can he or she possibly think about doing something that could harm it? Since environment is not only constituted by physical space, but also by living beings on it, sensibility about environment would help society to create a state of harmony and conviviality.

Healthy neighborhoods are those where people share commonly agreed norms of behavior. In these neighborhoods people care for each other, there is a high interaction between neighbors, and people feel part of the place and feel the place as part of themselves. Phillip Clay (1979) mentions what he considered are the basic conditions to keep community network functioning harmoniously in a neighborhood:

- The extent to which neighbors are expected to be concerned for one another.
- The degree to which self and family discipline are reinforced in social interactions.
- The extent to which individuals uphold the integrity and image of the place.
- The extent to which positive reinforcements and negative sanctions are directed against outsiders who violate norms.
- The extent to which newcomers are integrated into the neighborhood.

Neighbors can only be concerned for each other if they develop some kind of social bond, and this is only possible by a constant interaction between them. To develop interaction among neighbors first there should be a place where they can share time and experiences together, or at least certain physical conditions of the place that allow casual encounters of neighbors. Most of our new neighborhoods do not consider communal places, such as community centers, parks and plazas, in their planning; and when they do include parks into the neighborhood layout, they are located mainly in the borders of the

development, making it harder for neighbors to reach those places easily, and neglecting the possibility of casual encounters, as by regular use of functional paths connecting communal spaces.

When social interaction among neighbors is low, people become even more secluded in their own residences, adopting a position of irresponsibility for their community affairs. As Oscar Newman says: “When people begin to protect themselves as individuals and not as a community, the battle against crime is effectively lost” (Newman, 1973). And Jakle & Wilson focus the same concept more specifically to American culture:

Most Americans loyal to neighborhood ultimately assume stoic stances. They turn away from neighborhood interactions, and focus in protecting house and family. This prevention makes them less caring and socially integrated (Jakle & Wilson, 1992).

Isolation is a problem not only perceived at an individual level. Isolation of neighborhoods into private communities, detached from the city structure makes urban problems worst. In the same way, as each community must organize itself as a social group to create their own sense of territoriality, communities must also be organized as part of a larger structure, the urban structure. These two requisites for a healthy social environment in our cities must be balanced and work harmoniously. One way to obtain this balance is cited by Jacobs (1961), it is the development of the District. The District acts as a transitional stage between neighborhood and city, and also gives major power to residents to affront local governments, making more effective their petitions and plans for the improvement of their place. Jane Jacobs also describes four points useful to make connection between neighborhood, district, and city more effective:

1. Foster lively and interesting streets.
 2. Make fabric of those streets as continuous a network as possible through a district.
 3. Use parks and squares and public buildings as part of this street fabric, to intensify and knit together the fabric’s complexity and multiple uses.
 4. Emphasize functional identity of areas large enough to work as districts.
- (Jacobs, 1961).

Many neighborhood problems such as crime are sometimes too big to be handled exclusively by communities. Weak neighborhoods, without an effective representation at a larger scale (district or city), would struggle to obtain support from local and city authorities. To create effective cooperation between neighbors and civic authorities, there must be instances that allow this relation to develop. Joint ventures of community members and civic authorities are an important way to foster this relation, but first there should exist the physical structure inside the neighborhood where those activities can take place.

During the process of evolution of cities, new infrastructures such as freeways, buffer areas, green belts and/or bad planned parks, industrial facilities and super blocks creates barriers that isolate neighborhoods from the rest of the city. Those urban elements usually break the links that neighborhoods originally had with the rest of the city. Communities located in those affected areas begin processes of deterioration of the social structures and dereliction of the built environment, both mutually affecting each other. With the loss of civility social problems flourish and continue taking strength as communities become more isolated from the rest of the urban core.



Fig. 2.10: Freeways disrupt not only physical, but also social structures of cities.

Source: Halprin, 1972.

As important is social life for neighborhoods, it is also important providing residents with options to be exposed and participate in social life. Every person approaches social experiences in a different manner and at a particular pace. Some urban layouts are so strict that people are “forced” to face public interaction in a unique, direct and open way, and for some people this condition could be considered as a violation to their rights for privacy. In designing public spaces, we cannot forget that individuals’ personality and cultural traits determine basic social functioning. That condition requires the inclusion of transitional spaces between public and private zones, which act as facilitators for social encounters. Other elements can be used with the same purpose, for example facilities or functional spaces that provide chances for casual encounters, such as communal building, laundry rooms, mail rooms, and others.

Gehl (1987) classifies outdoor activities in three main groups: Necessary activities, those that are required by our own way of living such as going to school, to work, to taking public transportation, and others. Optional activities are those that are not really necessary but take place when time and place make them possible, such as outdoor recreation. And social activities are those that require the presence of other people engaged in the same activity, such as concerts, meetings, festivals, etc. A very important element of this last kind of activities is the presentation of opportunities for passive or

causal contacts, as seeing and hearing other people without being actually engaged in a social intercourse. From these passive contacts there is a greater likelihood to spontaneously develop more formal relationships. When there exists in the neighborhood places that facilitate passive contacts, the possibilities to develop social and community ties are higher.

Hall (1966: 10) cites studies that show how some spaces are *Sociofugal*, pulling people apart and avoiding social relationships (for example, waiting rooms with benches aligned back to back). In contrast, some spaces are *Sociopetal*, they tend to bring people together and encourage communication (Spaces with sitting distribution around a central area, where people face each other). If we want to design places that encourage community associations, we should look for physical layouts that bring people together, spaces that are sociopetal instead of sociofugal (fig. 2.10). This principle should be applied not only to small urban public or semi-private spaces, but also to the scheme of the whole neighborhood. For example, Hall assimilates the orthogonal grid, so commonly used for layout of modern cities, as predominantly sociofugal. In contrast to it, he considers the radiating system as sociopetal.



Fig. 2.11: Some spaces, such as railway waiting rooms, tend to discourage conversation (sociofugal spaces). Others, such as the tables in a European sidewalk café, tend to bring people together (sociopetal spaces). Source: Hall, 1966.

Some theorists believe that new advances in communication technologies and the proliferation of automobiles in modern society are weakening the traditional social function of the neighborhood. Altman and Wandersman (1987) remind us that the immediate neighbors, and the social interaction between them, are still of big importance for modern communities:

Immediately proximal neighbors also often serve as support systems by providing emotional and material aid. In addition, they may foster a sense of identification and be a buffer from the feelings of isolation often associated with large scale urban and suburban communities. (Altman and Wandersman, 1987: xvii).

Close neighbors are also important to watch another's home for intruders and possible emergencies. A well-developed neighborhood network can be the best security provider, enhance civic pride and, consequently, create healthier environments for all.

Although community is formed through a process of identification of the group as a particular entity, this cannot determine the isolation of a group from its larger milieu, the urban network. Hunter (1987: 203) mentions that the social construction of community identities takes place in an intra-community context; the others (outsiders) reinforce the perception of the self, and its particular identity. This intra-communities interaction creates cities socially active, with citizens acquiring responsibility for common problems and their solutions.

Neighborhoods where agents for social control are strong (family, church, school, neighborhood association, and other community institutions) present fewer possibilities for social disorder (Skogan, 1990: 126). For this reason, many efforts to rehabilitate areas affected by social problems are usually focused to enhancing community associations and social groups. As Skogan says (1990: 127): "Social strategies have a great deal of romantic appeal, for they promise to bring village-like harmony to twentieth century city neighborhoods". The reality in modern cities is that community organizations for crime control are least common in areas where they are needed the most: low-income neighborhoods and depressed areas. (Skogan, 1990: 130). The task is therefore a more complex one, and requires attention not only to social programs to promote community, but also must deal with economic development plans, changes in the physical layout of the place, political action, and psychological counseling, among others.

Cohesive communities are more able to control crime in their territories than diffuse ones. One of the ways in which these communities control crime is by means of social embarrassment, isolation of individuals, and potential retaliation (Skogan 1990: 137). They also foster other important processes that enhance civic and social qualities in residents, and mainly, develop sense of territoriality, which is one prime element to prevent crime in neighborhoods.

2.5 PHENOMENON OF THE INNER-CITY NEIGHBORHOODS

Traditional American cities, as many other cities in the world, were developed around an administrative and commercial center. After the Industrial Revolution, new factories and other infrastructures replaced retail stores, offices, and entertainment places, damaging the original functional structure of the cities and disrupting their social networks. Some of these areas began a process of deterioration of the physical and social qualities due to the decline of the habitual social activity and community involvement. Herds of migrants leading to the big cities in search of new jobs tended to occupy those depressed areas close to factories in downtown areas. Traditional dwellers of these neighborhoods fled, mainly to the suburbs, in search of a better environment to live in.

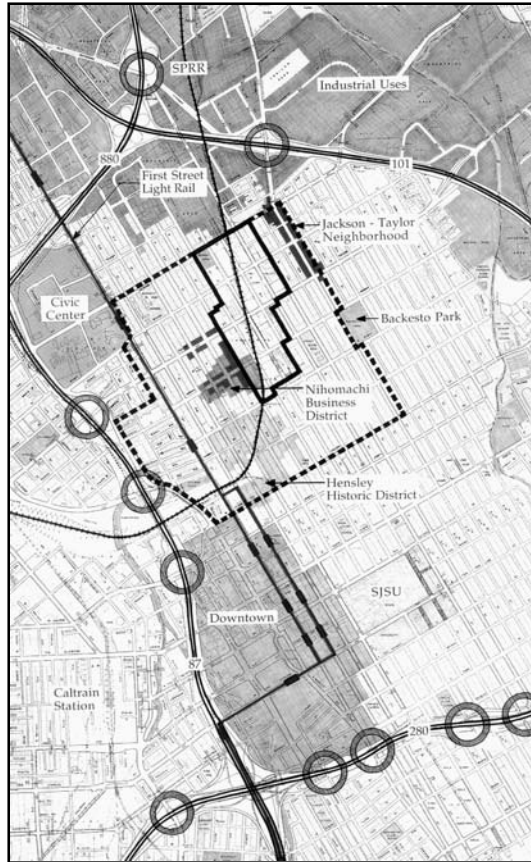


Fig. 2.12: Plan of Downtown San Jose, California: traditional downtown areas affected by freeways, railroads, and industrial zones begin a process of deterioration of their physical and social structures.

Source: Katz, 1994

The process of dereliction became a phenomenon of major dimensions in many inner-city residential areas in the beginnings of the 70's, which also coincides with the boom of suburbia. Not only the construction of new roads and the widespread use of the automobile contributed to urban sprawl, but also the lack of investment and consequently decay of downtown areas:

Maintenance in public housing declined precipitously after the Brooke Amendment was placed on the 1969 Housing Act. Housing authorities were prevented from charging rents in excess of 25% of a tenant's income. Federal subsidy was promised to cover the difference between tenant's allowable rent and an authority's normal break-even rent; however, Congress has never appropriated sufficient funds. In the 1970's managers were left with little choice than to divert monies from maintenance (Jekle & Wilson, 1992).

Process of industrialization and market pressures are two of the main causes of decline of inner-city neighborhoods and the consequent rise of crime. John Bright (1992) adds that these changes weakened the traditional family structure producing a loss of cohesion in local communities. It is common in America to find neighborhoods in inner-city areas whose original urban structures have been destroyed by the passing through of highways. Additional neighborhoods' disruption came with the overlay of super-blocks

over the traditional urban grid. This is a phenomenon that started in the 1950's and mainly affected low-income residential areas, where residents offered low degree of resistance against planners and city authorities.

Later, in the 1970's and 1980's, federal programs of urban renewal displaced population from those areas rather than reestablishing the residential character that had been damaged (Skogan, 1990: 177). These type of programs only made the existing problems worse, breaking the already weak community networks, and creating isolated areas, where criminal forces easily took-over dwellers.

Lack of investment in downtown residential areas, decay, abandonment and carelessness promote feelings of irresponsibility and civic apathy among neighbors. When this happens, criminal acts such as vandalism, gangs activity, and crimes against property develop inside the area; some of the residents become the offenders, making it harder for authorities to control them. As Franklin Becker mentions:

Much of the apparently willful destruction of the physical environment seems to be preceded by the perception that administrators, managers or designers do not care about, or are even hostile to, the persons living in the setting (Becker, 1977).

Those who own business and neighbors who live in downtown areas should be the most interested in keeping these places safe and alive. But there is a point when deterioration is so serious and so pronounced that private investment is not enough to control social problems. It is then when governmental investment and bigger scale measures are needed. When these other measures fail, or as it usually happens, come too late, people take the easiest and sometimes the only way, which is just to flee, leaving their old neighborhoods to the outlaws. These abandoned centers that once were vital places, become areas dominated by crime.

Inner-city areas are also usually associated with gang related crimes, and this is a problem related to social and physical disorder, as Bright explained it: "The most organized and serious gangs tend to emerge in areas characterized by low-income, social isolation, and community disorganization caused by rapid population change" (Bright, 1992: 52). It is not a problem related only to a condition of poverty; it is a symptom of community disorder. And because it involves mainly young people, it is to this population group that most of the efforts for rehabilitation must be directed. These solutions should focus both in social rehabilitation and in a change of physical conditions of the place that can exacerbate the problem. As Bright also mentions:

Disorders are the visible symptoms of decline in neighborhood in which processes that maintain social order are breaking down...Controlling the spread of disorder may also deter serious crime" (Bright, 1992: 75).

Vandalism and gang formation can be considered in these cases as a way to show unconformity and send a message to city authorities that more investment is needed in inner-city areas. As Jakle and Wilson mentioned: "Decline and dereliction intensify in restructured cities that have generated benefits for only select populations" (Jakle & Wilson, 1992). This kind of criminal behavior is usually associated with young people, a

fact that can be considered as an indicator of some failure in the basic social structure of those communities. Kids up to 14 or 15 year-old do not have many chances to move easily out of their immediate surrounding. It is from areas close to home and from school where they get most of the information that shapes their social behavior. Therefore, any program looking for rehabilitation of youths must be focused to the upgrading of their closest environments. Both good civic behavior and criminal behavior are learned in the same environment where they live. For this reason juvenile crime must be considered as a clear signal that there is something wrong with the social structure in those particular areas, and investment in social programs are needed immediately, in order to avoid greater problems in the near future.

People who grow up in inner-city, low-income areas have usually less opportunities to thrive in this world than those who are raised in middle-class or high-class neighborhoods:

Poverty is perpetuated by transmission of values across generations that lock low-income households into low-income castes. Thus, those submerged in welfare living tend to spread values of little ambition and lack of self-reliance (Jekle & Wilson, 1992).

Thus more than being a problem of economic characteristics, it is a problem characterized by a detriment of social and moral values, low self-esteem, and little reliance in the future. It could be assumed that with the right incentives, and a positive environment, kids growing up in low-income neighborhoods should share the same ideals and aspirations about the future as other kids growing up in upper-level neighborhoods.

The actual reality is that downtown areas are usually areas without a clear character, where spaces are considered “public” in the sense that they do not belong to anyone in particular, at the same time that they belong to everybody, except to the local residents. Numerous business and office buildings share the same area with the few residents who did not take the chance of fleeing to the suburbs, or did not have the means to do it.

Problems of vagrancy, delinquency, vandalism, and dereliction are common in downtown areas of big American cities. Residents usually refer to those problems as “city’s problems” leaving the responsibility for their solution to city authorities. Thus downtown areas present low involvement of neighbors in their rehabilitation. This low level of involvement makes these places especially susceptible to criminal activities. Criminals can perceive abandonment and dereliction as a signal of low resistance and social apathy in neighbors. Jakle and Wilson explain this situation:

Low-income zones are often areas of low political resistance, permitting municipalities to site toxic waste sites, prisons, halfway houses, and the like with least political repercussion. Political under representation, minimal political clout, and unorganized or disorganized constituencies make such areas prime sitting locations for these facilities (Jakle & Wilson, 1992).

Low community representation at political level could be seen both as a cause of urban dereliction, and as a result of environments that do not foster neighborhood pride. When residents feel their place belongs to them and feel proud of it, they would do whatever it takes to defend and preserve the qualities of their cherished land.

Disorder and decline in inner-city neighborhoods create dissatisfaction among neighbors about their place of residence. Studies presented by Skogan (1990:13) prove that residents' dissatisfaction with their physical setting and crime problems are directly related. Most of the people's dissatisfaction is related to the physical conditions of the setting. Inner-city neighborhoods are commonly places of low investment and lack of plans for aesthetical renewal. Deterioration is a gradual process that become harder to control once it has started. As Wilson and Kelling (1982: 31) mention: "One unrepaired broken window is a signal that no one cares, so breaking more windows costs nothing".

Wesley Skogan explains the problems associated with physical and social disorder in residential areas:

First, disorder undermines the mechanisms by which communities exercise control over local affairs. It fosters social withdrawal, inhibits cooperation between neighbors, and discourages people from making efforts to protect themselves and their community. Second, disorder sparks concern about neighborhood safety, and perhaps even causes crime itself. This further undermines community morale, and can give the area a bad reputation elsewhere in the city. Third, disorder undermines the stability of the housing market. Disorder undermines residential satisfaction, leads people to fear for the safety of their children, and encourages area residents to move away. Fewer people will want to move into the area; the stigmatizing effect of disorder discourages outside investors, and makes it more difficult for local business to attract customers from outside. All of this erodes the values of real state in disorderly communities, contributing to the further deterioration and abandonment of residential and commercial buildings. (Skogan, 1990: 65).

Unfortunately, many of the efforts to revitalize cities' downtown areas are focused on commercial and offices areas. Goldfield (1987: 247) noted:

A more common strategy in effecting an urban revival focused on downtown revitalization. The new urban mayors of the late 1970s and the 1980s are as much pitchmen and recruiters as they are administrators. Economic development is a major objective of city administrations today, and downtown is frequently one of the primary focal point of this effort. Gleaming office towers, spacious pedestrian and shopping malls, trolleys, markets, and even parks are the high-tech paraphernalia of downtown revival.



Fig. 2.13: In recent downtown redevelopment plans, the main focus has been a nostalgic revival of old towns urbanism, forgetting in many cases about the solution to social problems of the area.

Nowadays, downtown areas are utilitarian spaces rather than community centers. Most of its users do not belong there; consequently, they feel no responsibility for the area's quality. People in downtown are all strangers: strangers to the place and strangers to each other. This situation creates a character of anonymity, which facilitates criminal behavior, making it almost impossible to recognize insiders from outsiders, dwellers from strangers. Criminals will also feel that it will be less probable to be caught, first because people do not really care about other strangers, and second because the anonymity factor makes it difficult to recognize the offenders.

Inner-city areas, because of the characteristics of the users and uses, are frequently anonymous in nature. As if they were a rented car or a hotel room, those urban spaces are considered either no one's or everybody's, but rarely our place. In these terms, dereliction and vandalism are likely to occur, and consequently criminal behavior is also attracted.

An option taken by some middle-class residents who want to continue living in inner-city areas experiencing dereliction is to enclose themselves in "security-guarded fortress" (Newman, 1973). These gated communities aggravate the problem of neighborhood safety because they displace crime to the surrounding areas. Also, areas surrounding those residential complexes become more dangerous because human presence or normal activity decline.

The housing model of fenced communities shows a misunderstanding of the concept of territoriality and access control as strategies to deter crime. The assumed level of security for residents living in fenced projects is also relative since the surrounding areas would become more prone to crime; and casual surveillance by passers-by of the project's interior grounds becomes difficult.

Poor maintenance and vandalism set up a vicious circle (Gehl, 1987: 281) making it harder and more costly to correct or reverse later once it has started. In fact, studies have shown not only that urban disorder promotes crime, but also that criminals feel attracted to such areas because of the opportunities they offers to commit criminal acts (Skogan, 1990: 73). Maintenance is a critical point in inner city and low-income neighborhoods in general. When it is known that the residents cannot cover the expenses for a proper maintenance of the public spaces, the government should take active participation in this matter.

Even though inner city areas present many different social problems, affecting also their physical structure, these are areas that have great potential to be transformed in livable places. These areas are usually rich in cultural diversity, uses and services, and an adequate density to foster social interaction. Greater investment in rehabilitation and a better understanding of the social and physical mechanisms acting in the area could transform those inner city places in healthy neighborhoods, where residents can develop a deep sense of communal life.

2.6 LOW DENSITY VS. HIGH DENSITY

Density is an important factor to consider in designing safer environments. Nevertheless density, as race, poverty, and other similar qualifications, should be analyzed considering other factors that also play a role in promoting crime activity. We cannot determine that high density is the cause of higher crime, or that low density is beneficial in order to control crime, without first considering cultural aspects, physical layout, and social conditions of the place.

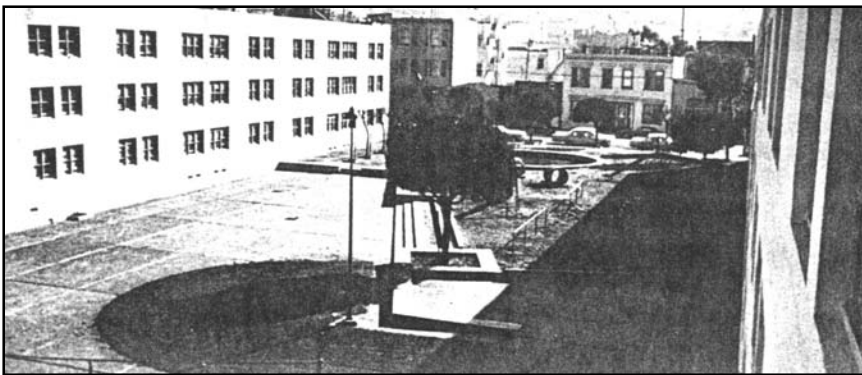
Oscar Newman mentions a study done in New York City that affirms that housing projects above 50 units per acre have usually the highest crime rates. This type of development corresponds to high-rise buildings, generally (Newman, 1973). He also shows that buildings no more than four to five stories-high are safer than taller buildings.

Crime in high-rise developments mainly happens in staircases, corridors, communal areas without frequent use, and open spaces that have no surveillance or control. Many of these areas could have been designed to improve their safety conditions. Also, better-designed public and semi-public spaces could encourage use by residents, becoming in this way casual watchers of the area. The main factor leading to the highest crime rates, I believe, is not high-density; the main factor is the lack of a clear understanding of the causes of crime nature and the relation of crime to the built form.

Newman mentions that it has been proven through different studies that the higher the level of recognition among neighbors, the lower the crime rates (Newman, 1975). If this is true, that could be assimilated as: the smaller the community, the better it is for crime prevention purposes. What is really important about those studies is that designers must always look for layouts that encourage neighbors' interaction. Even large-scale projects could be break down into smaller sub-units, so chances for neighbors' interaction and recognition are increased. Each sub-unit should not have more than the necessary number of houses to be able to form a small but effective community, and which their residents could easily control.



Fig. 2.14a and b: On the left, Pruitt-Igoe, a high-rise, low-income housing project, presented very high crime rates. On the bottom, North Beach, a low-income, three-story high housing project in San Francisco, with considerably lower crime rates than Pruitt-Igoe.



One example of this type of developments is mentioned by Jan Gehl (1987), a cooperative housing project in Tinggarden (Denmark). It is a project built in 1978, which was designed in a joint venture of architects and the future residents. Both physical and social structures were carefully considered. The whole project was divided in 6 groups of 15 houses each. Each group of houses was provided with a communal building, but also a larger community center was included for the whole complex. In this way stronger social networks are encouraged, and control of their specific site is made easier. Gehl explains the advantages of this type of urban layouts in more detail:

Visually, the social structure is expressed physically by placing the residences around group squares or group streets.

Functionally, the social structure is supported by establishing communal spaces, indoors and outdoors, at the various levels in the hierarchical structure.

The major function of the communal spaces is to provide the arena for the life between buildings, the daily unplanned activities –pedestrian traffic, short stays, play, and simple social activities from which additional communal life can develop, as desired by residents (Gehl, 1987).

It is important to remark the last expression in the paragraph “as desired by residents”. Any effort of social organizations and governmental agencies for developing

community sense in a residential area won't have the best results without the innate desire by residents to become a community, to get united, as a common effort to benefit their place. Dense layouts could provide better chances for people to get together and form strong communities. According to Alan Jacobs: "People living in close contact are more likely to form community associations and to respond to issues that may be of concern to all" (1985).

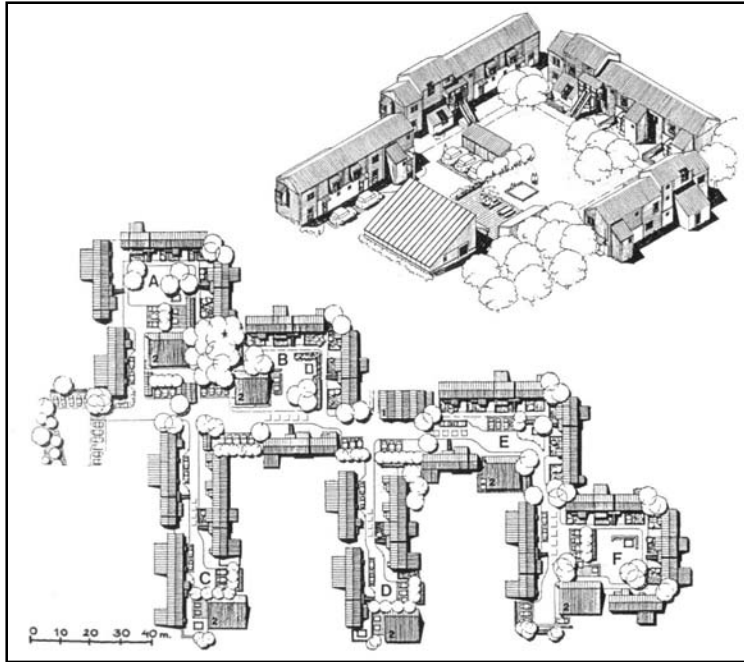


Fig. 2.15: Tinggarden, a housing project located south of Copenhagen, consists in 90 units subdivided into 6 groups of 15 houses in average, each one organized around a communal space. Source: Gehl, 1987.

One example that shows that relation between density and crime is more complex than what could be easily assumed is the comparison between Japanese and American cities. Japanese cities are more than three times denser than American cities, but crime rates in Japan are significantly lower than those in United States (Wilson and Herrnstein 1985: 453). What is mentioned as possible factors contributing to lower crime rates in Japanese culture: homogeneity in population, conservation of village's life style, emphasis on group solidarity, and preoccupation about people's obligation rather than people's rights. The main conclusion is that Japanese care more about social achievements than individual's concerns. High density in cities should not be considered as a cause of misbehavior if there is a sense of social obligations and group identity among the residents.

Overcrowding is a different condition than high-density. Overcrowding happens when spatial requirements of humans are violated. At that moment, living settings create conflicts among residents, leading some times to acts of aggression. Hall explains this phenomenon in this way:

It is now believed by ethologists such as Konrad Lorenz that aggression is a necessary ingredient of life; without it, life as we know it would probably not be possible. Normally, leads to proper spacing of animals,

lest they become so numerous as to destroy their environment and themselves along with it. When crowding becomes too great after population buildups, interactions intensify, leading to greater and greater stress” (Hall, 1966: 5).

Hall also mentions some laboratory tests using rats in which overcrowding led to disruption of social functions and later to collapse of population. It is also acceptable the fact that humans, as other species, need to associate with others in order to survive. To determine the point where a functional group transforms to a group with conflicts is the key element in designing spaces for communities.

People have specific needs in terms of social, personal, and intimate spaces. The dimensions and qualities of those spaces are determined by the cultural and social backgrounds of the individual, and for his or her specific psychological demands. The accelerated growth of cities and increasingly higher costs of land have forced developers to create denser neighborhoods. As overcrowding increases, intimate and personal spaces are violated, and stress becomes a cause of conflicts among neighbors. It is a requirement for designers to learn to appreciate the natural human need for personal space. Edward Hall explains this in the following terms:

If one looks at human beings in the way that the early slave traders did, conceiving of their space requirements simply in terms of the limits of the body, one pays very little attention to the effects of crowding. If, however, one sees man surrounded by a series of invisible bubbles which have measurable dimensions, architecture can be seen in a new light. It is then possible to conceive that people can be cramped by the spaces in which they have to live and work. They may even find themselves forced into behavior, relationships, or emotional outlets that are overlay stressful... When stress increases, sensitivity to crowding rises” (Hall, 1966: 121).

High density is not a problem for social relations per se; it becomes a problem when cultural and/or psychological traits particular to each human being create a conflict with the individual’s expectation of what the setting should offer him.

A method used in laboratories to increase density in rats’ population is to subdivide them in smaller groups, separated by physical barriers, so they cannot see each other (Hall, 1966: 157). Applying this concept to human settings, it could be considered as a way to build higher density housing projects, where inhabitants do not feel overcrowded. A scheme of this type would also permit an easier formation of community affiliations and a better control over particular territories. But even dividing population in sub-groups can become a factor of stress and social conflicts if the number of members of each group surpasses the functional and social capacity to allow a pacific living. Hall also mentions that a problem of this method for increasing rats’ population in laboratories is that “caged animals become stupid, which is a very heavy price to pay for a super filling system” (Hall, 1966: 157). Therefore, the real achievement for designers and developers would be to create residential projects that permit higher densities keeping a healthy environment for people to interact with each other in a positive way, and consolidating their social networks.

Factors such as ethnicity and psychological characteristics affect perception of crowding: “urban scale must be consistent with ethnic scale, since each ethnic group seems to have developed its own scale” (Hall, 1966: 159). This aspect can be appreciated when comparing Latino settings with, for example, typical Anglo-Saxon settings. Some groups also have a different perception of social interaction: “highly involved people apparently require higher densities than less involved people, and they may also require more protection on screening from outsiders” (Hall, 1966: 159). What seems still paradoxical is if it is the characteristics of a place that encourages more social involvement, or if it is the cultural characteristics of a group that shapes the particular environment to fulfill specific social traits. In other words, is it the environment affecting people’s behavior, or people’s characteristics shaping the environment to their particular needs? In any case, physical environment and people affect each other, and higher density or lower density must be according to each particular perception of space.

Before modernization, traditional towns were planned as multi-functional centers, where housing, commerce, institutions, service, and recreation areas shared the same space, without predetermined boundaries. This system was changed by the modern urbanism, which introduced the idea of zoning by specialized uses. The traditional town was then divided in housing, industry, and recreation (Turner, 1996). Functional subdivision of the city creates a situation in which each of those specialized areas has a specific activity period, followed by a lapse of passiveness; for instance, imagine an industrial zone at 7 pm, or a commercial area at 6 am. If we take in consideration Jane Jacobs’ concerns about having “eyes on the streets” as a way to control crime, we could affirm that during those dead lapses the area would be more exposed to crime and other misbehaviors.

The theories of the New Urbanism advocate for a recovery of the traditional town layout, where different activities overlap in the same areas. This means also that the period of activity in a specific area would be extended, shortening the lapses of crime vulnerability. Post-Modern or New Urbanism is described by Tom Turner (Turner, 1996) as a system that is more similar to natural habitats, where zones are cultural, not functional, offering more possibilities to residents, such as offering more chances for daily encounters with other neighbors, which promotes the creation of social networks. More services offered close to homes means more people moving in a smaller space. In this type of urban environments, people begin to recognize their neighbors and become familiar with their place, favoring community life.

New Urbanism, as any other revolutionary movement in planning and design, has supporters and detractors. Mixed uses and higher densities could be favorable to avoid urban sprawl and the related vehicular traffic problems. But for some, it is just a fetish of past times, an expression of nostalgia that does not really relate in a practical way to the problems affronted by today’s society. Even though a search for solutions in the past should not be considered as a wrong course to take, it should be carefully analyzed, not only in a formal context, but also in a functional and social manner. As Peter Rowe points out:

The inherent idea of a strong local urban architectural tradition, for instance, often implies various forms of contextualism, the use of vernacular, the search for some form of *Genius Loci*, and so on. When

such tradition is primarily a source of cultural continuity, this local orientation can be well worth pursuing and perpetuating. When, however, this resort to tradition result in nostalgia and making a fetish of the past, it is clearly an undesirable course to follow (Rowe, 1997).



Fig. 2.16: New Urbanism proposes mixed uses areas, and greater densities to improve community interaction in modern cities.

Source: Katz, 1994.

With a country as extensive as the U.S., where cost of urbanization of rural lands is relatively low, it is really easy to become wasteful. Cities are sprawling over its natural surroundings, supported by avid consumers escaping from the “crowded” or “old” cities, always in search of the newer:

Increasingly Americans have come to view themselves as agents of consumption and less as producers. Consuming has become a primary duty necessary to keeping the economy healthy as well as the individual fulfilled... Mass consumption has brought widespread acceptance of the idea of change; and values –like the commodities one consumes, are expected to change, giving legitimacy to those who innovate. (Jakle & Wilson, 1992).

Considering built environment as a transitory object of use, people will never feel themselves really involved with the care and improvement of their own physical space. In the same sense, people living on those environments have the same ephemeral character.

This transitory nature of inter-personal relations among neighbors, when they occur, determines the weakness of community associations in American neighborhoods. Without a strong liaison, collaboration, solidarity, and mutual support between people, all of them important elements to deter crime, residential areas become easy target of offenders.

Today it is harder for people to get sentimentally attached to their place of residence, mainly because modern society demands more frequent displacements and relocations:

Americans are a people who never arrive. They only depart. The places that they create are evanescent. All seems impermanent, and in impermanence, much seems disordered (Jakle & Wilson, 1992).

Aggravating this characteristic of modern cultures is the fact that Americans are obsessed with the “new”. Consumption is an important part of the culture, and this is also applied to the building market. It is usual to find 20 or 30 year-old buildings demolished because they were “too old”:

A central problem of modern capitalism is the need to stimulate consumption. Goods and services, and even places, have to be cycled toward sustained investment, the purpose of capitalism being profit (the bigger, the faster, the better). Thus we found ourselves in an age of planned obsolescence where things are engineered to fail, or ornamented to fall out of style (Jakle & Wilson 1992).

The fleeing of people to exurbia can be understood in two ways: first, cultural, as American people obsessed by the idea of independence, individual success and possession of land to become truly part of this nation; second, social, as an intrinsic quality of a consumerist society. Americans are always looking to get better and newer things, even when actual possessions satisfy their basic needs. According to this last point, the permanent search for newer commodities is an important part of the whole system that keeps this country’s economy:

Accelerated depreciation was introduced to stimulate new construction and, thereby, stimulate economic growth, the building industry having convinced Congress of its special role as economic catalyst. However, emphasis on new construction has meant a deemphasis on rehabilitation (Jakle & Wilson 1992).

This is an important point to understand why downtown areas receive insufficient funds to be rehabilitated, propagating in this way dereliction in central areas and, consequently, creating more favorable places for criminal activity. But, is fleeing to the suburbs a good option to escape from crime? Is suburbia really a safer place to live in? If we analyze crime reports for any big city in the U.S., the results would seem to confirm

the assumption that the inner city is least safe than suburbia.¹ Nevertheless, many other factors should be analyzed before arriving to any conclusion; inner city and suburban areas are two completely different milieus: the first with multiple uses, users, and social or cultural sub-groups living together; the second is an almost homogeneous residential area, with an also homogeneous population. This does not mean that mix uses or cultural heterogeneity are bad, not at all. What this means is that when places are to be used by different social groups or to accommodate different uses, they need to be correctly planned. Buffer zones should be incorporated between public and semi-private or private areas, or between recreational and residential zones, in order to avoid conflicts between users, and to keep the main character in every zone.

2.7 CRIME AND FEAR

Fear of crime is as bad as crime itself. Fear of crime creates a state of astonishment among residents and impels their willingness to act against perpetrators. The effects of fear to crime, in this sense, are worse than criminal acts that may occur. As Skogan (1990: 68) mentions, there are some studies that demonstrate that “crime is encouraged by low levels of surveillance of public spaces, and reduced by people’s willingness to challenge strangers, supervise youths, and step forward as witnesses”.

Fear prevents people from taking effective action against delinquency, becoming passive victims, and living constantly intimidated by the criminals. As Newman says:

Fear in itself can increase the risk of victimization through isolating neighbor from neighbor, witness from victim, making remote the possibility of mutual help (Newman, 1973 b).

Factors leading to pluralize fear of crime depend on the level of involvement between members of a community, the characteristics of social ties, and the sense of territorial rights and place affiliation. Newman also mentions that under normal circumstances, people would prefer to stay separated from any confrontation with criminals, even when they are direct witnesses. But when crime is against some one who is related, or if it is a personal offense, people then will react. This shows that an important aspect to consider when creating new communities is to look for ways to increase in neighbors a sense of involvement with each other, and that the public and semi-public spaces belong to them, and it is their responsibility to keep their place safe. Residents should be conscious that whatever threatens the good qualities of that space is directly threatening their own place of residence, their own family.

As a vicious circle, places that do not offer conditions of safety promote feelings of distrust among people, which at the same time promotes fear as a result of individuals fighting alone against social problems that must be affronted as a group. Goffman (1963: 105) explains how in societies where public safety is not well established “the danger that a face [to face] engagement may be a prelude to assault becomes appreciable, and extensive avoidance practices or greetings at a distance tend to be employed”.

¹ According to the 1999 victimization report prepared by the US Department of Justice, 41.5% of personal crimes in American cities were in urban areas, and 33.7% in suburban areas; and of every 1,000 crimes against property, 256.3 were in urban areas, against 181.4 in suburban areas.

Cognitive recognition of others sharing the same place of living is a method humans use to keep and feel safe in their own territory (Goffman, 1963: 113). This process of recognizing others is developed through casual or formal encounters and becomes stronger through time and shared experiences; “once this information relationship has been established between two persons, it seems, with certain exceptions, to give rise to a social bondedness, placing both individuals in a new, typically nonterminable basis in regard to each other” (Goffman, 1963: 112). From this appreciation it seems obvious the importance of spaces that promote social encounters in neighborhoods, and support formation of social networks that would help communities in their common efforts to create and keep their place safe.

Suttles (1968) explains that many of the problems of gangs’ activity could be explained as a way of coping with fear and as a need for self-defense. If formal authorities are not enough to protect all citizens, and if the urban environment is prone to crime, people will look for ways to protect themselves. Nevertheless, they will continue living under fear and deception, possibly waiting for the opportunity to flee, leaving the problem to those who remain. As the residents’ resistance decreases, the criminals’ power increases, forming another vicious circle.

Some physical elements of a place, particularly those that are symbols of dereliction, promote feelings of fear among visitors. Usually physical deterioration is associated with social dysfunction, and consequently, crime. Dear and Mahs give the following description of “Skid Row”, one of the highest crime places in Los Angeles:

As a physical environment, Skid Row is a landscape of despair, hard-edged and inhospitable...The sidewalks are almost devoid of trees or other landscaping. They are deeply stained and dirty, and in some areas are lined with old trash cans used as fire pits. Parking lots are barren expanses surrounded by cyclone fencing or razor wire. Many buildings are in disrepair. Symbols of despair and deprivation, used needles and syringes, cocaine pipes, liquor bottles, castoff clothing, and cardboard-box shelters, are everywhere (Dear and Mahs, 1997:187).

A movie director will surely use the same physical elements to recreate a place that could unequivocally be identified by the spectators as a place of crime and danger. The same happens in real life, people take physical dereliction as a sign of potentiality for crime. In this sense, ruined or dirty places evoke fear, discourage use, and become deserted areas. It creates the optimal conditions for criminals to rule the place and impose their law. Residents’ feelings of fear and impotence are a main fuel for criminal activity in an area.

The percentage of people that think they can be assaulted in a specific place is considerably higher than the people who are really attacked (Taylor, et al 1979). But even if chances to be attacked are considerably lower than what people think, the feeling of fear is a real and intimidating element, and generally produces avoidance for the place, and indifference for the problems affecting it.

One of the worst consequences of fear in modern cities is neglecting public spaces, such as parks and streets, as places for gathering and socialization. These functions have now been relegated to malls and private clubs, spaces where people feel



Fig. 2.17: Homeless people at Towne Street (Los Angeles). Signs of physical and social dereliction promote feelings of fear.
Source: Dear and Mahs, 1997.

safer. Malls, the “plazas” of the 21st century, are basically super-buildings, surrounded by enormous paved areas and walls, which create a barrier to perfectly cut out any possible link with the city structure. Public spaces around malls, consequently, are usually dead spaces, deprived of any possibility to develop social activities through which humans could experience urban life.

Gated communities are the ultimate social manifestation of fear. People accept as a fact that there is no other solution to resolve safety problems in the city. These communities shift safety problems to the rest of the population. City dwellers now have to confront not only the original conditions of the phenomenon, but worse circumstances due to the atomization of the city and its community.

Enclosed communities are not exclusive of higher-income groups. In recent times inner city, low-income neighborhoods are closing streets in order to prevent drug-dealing, prostitution, and drive-by shooting (Blakely and Snyder, 1997: 93). In these lower-class “private communities” the main incentive for neighbors to surround themselves with barriers is not prevention, but a resource to fight and eliminate actual crime from their streets. This characteristic of low-income areas where crime is an actual problem makes worse the consequences of enclosing communities, as the crime is immediately displaced to the surrounding neighborhoods.

Walls and gates have an intrinsic meaning of fear and danger. The simple presence of walls to guard any property is a clear sign that there is a risk of being harmed in any way. Marcuse explains some of these meanings:

[Walls] very existence bears evidence to the limitations, the insecurities, the fears, that lead to their construction by those to be protected, at the same time as they may impose even greater limitation, insecurity and fear on those outside their ambit (Marcuse, 1997: 104).

The psychological consequences of walled communities are felt not only for those living inside the walls, but also for those relegated to live in the residual spaces outside the walls. Walls divide cities, at a physical and at a social level.



Lifestyle community



Elite community



Security zone

Fig. 2.18: Three types of gated communities representing the feelings of fear in modern city residents, at all social levels.
Source: Ellin, 1997.

“When open space is subjugated to the need for protective space, the celebration of or hopes through design gives way to the physical manifestation of our fears” (Sites, 1997: 120). This idea illustrates the reality of gated projects. Fear has taken the place of hope. To be obligated to live enclosed, apart of the exterior world, is to accept the impotence to control crime, thus the outlaws have won control over city.

Fear makes people distrustful of others. Community associations are harder to establish in environments dominated by fear, and it is obviously in those areas where they are needed the most. One solution to cope with fear in a community is to help residents to organize themselves into different types of associations, with many different purposes, not only to affront the problem of crime, but also to reinforce their sense of community, to believe that joined they will prevail against criminals.

2.8 THE BENEFITS OF USING VEGETATION

Humans need to feel stimulated by their environment. Due to characteristics of modern society, urban dwelling is becoming increasingly dull, affecting people's behavior, who are now forced to look for stimulation in other ways, sometimes healthy adventurous activities, sometimes different stimulation, as obtained from risky or illegal activities. In cities that resemble concrete deserts, vegetated spaces are looked as oases, as a relief, and as a source of stimulation.



Fig. 2.19: Modern cities are artificial and monotonous landscapes that deprive individuals of positive stimulation.

Source: Halprin, 1972

Plants are capable of changing people's mood. “Plants may be used aesthetically to evoke memories of other times, of other places, of feelings, of an attitude, of a way of thinking. They may be used to summon or bring forth innate feelings for the natural environment” (Robinette, 1972: 121). Stress caused by today's urban conditions can be a cause of social conflicts; vegetation has always been appreciated for its relaxing characteristics and may become an ideal resource for reducing tensions and psychological pressures on city residents.

Frances E. Kuo and William C. Sullivan founded the Human-Environment Research Laboratory, at University of Illinois at Urbana-Champaign, in order to study the benefits of trees, among other elements of the natural environment, in human

development. They have demonstrated, supported by specific data, that trees propitiate community involvement and sense of territoriality. One of those studies was done in a very large public housing project in Chicago: Robert Taylor Homes. The project consists in 28 identical buildings, 16 stories high. Some of the buildings are surrounded by trees, some are not. The study found that “people in buildings with trees knew and socialized more with neighbors from their buildings, had a stronger sense of community, and felt safer than people in buildings without trees” (Prow, 1999).

Benefits of contact with vegetation come as a response to characteristics that are part of human nature. Human beings need to be in touch with nature to develop a healthy social behavior. In the other hand, deficiency of contacts with nature can create problems of psychological and sociological order in individuals:

The relationship between trees and how well people function is an indication of how integral nature is to a fit human habitat, Kuo said. “Just as animals in unfit environments develop certain behavioral and functional pathologies, we may see more child abuse or crime or other problems when people live in unfit environments” (Prow, 1999).

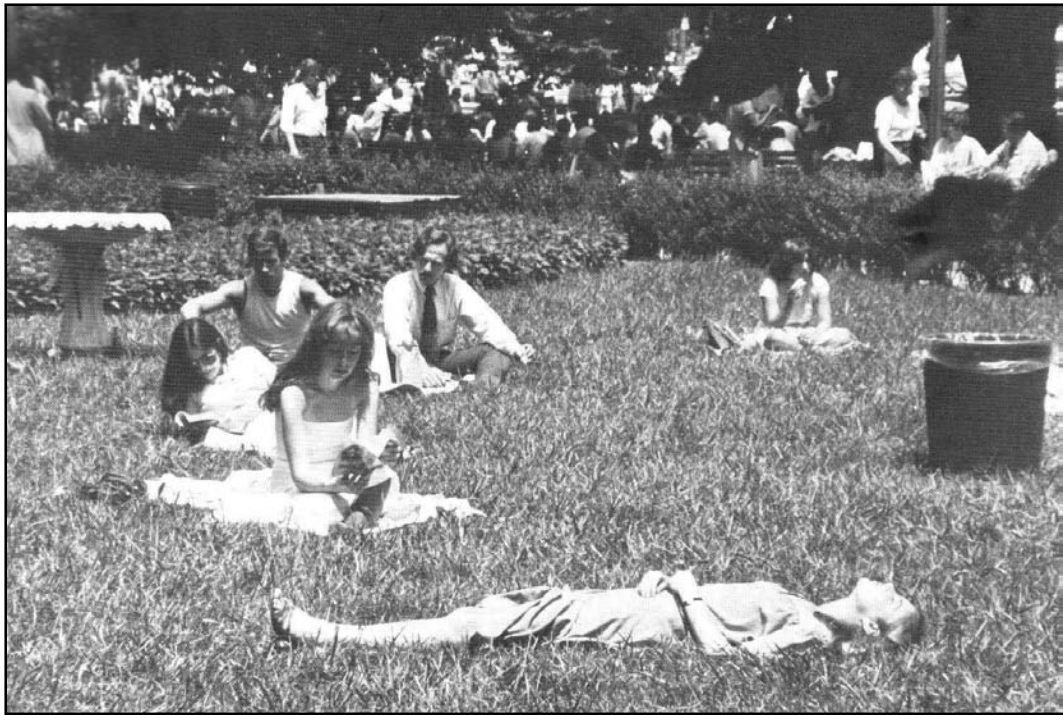


Fig. 2.20: Public parks in middle of cities are regarded as oases to enjoy of the beauty of nature, evoking positive feelings of sociality.
Source: Whyte, 1980.

A study presented by Franklin Becker shows that one of the factors that contribute the most to residents' satisfaction with their place of dwelling is landscaping, either as an existing natural area surrounding the project, or as part of the planned layout (Becker,

1977). Becker also states how personalization of the place of residence enhances the dweller's sense of identity, which is an element of prime importance to create a sense of place. A practical and effective way to allow residents to express their personal ideas is through landscape improvements, such as gardening, streetscape, creation and furnishing of private and semi-private spaces, and enhancing of communal places. These kinds of social activities promote neighbors' involvement in community issues, making it easier to develop associations that would be at the end the main keeper of the quality of life into the neighborhood.

One example of creating social networks and sense of identity among neighbors is also cited by Becker: The Garden Club of Philadelphia, which stimulated among residents a sense of pride for their neighborhood by donating flowers and gardening boxes. The club also advised neighbors how to plant and take care of the gardens. Through this activity, people began to talk to each other more frequently, and also use streets and other public areas regularly. (Becker, 1977). Christopher Alexander corroborates this theory:

Participation is inherently good; it brings people together, involves them in their world; it creates feeling between people and the world around them, because it is a world which they have helped to make (Alexander, 1975).

The International Society of Arboriculture, in its Home Page, Arboriculture On-Line (2001), presents a simple but useful classification of the benefits of using vegetation. Those benefits can be grouped into four different levels: social, community, environmental, and economic.

Among social benefits can be considered how contact with nature affects people's moods. In contact with trees, people feel more serene, tranquil, and peaceful. A good example of this type of benefit is that hospital patients recover more quickly when their rooms have a view of trees and planting areas. Thus, the same positive effect could be expected when using vegetation in crowded cities as a way to reduce stress and confrontations between residents.

Community is enhanced when trees, not walls or fences, are used to mark territories, and divide public from private grounds. Also, even when trees are located in private areas, the whole community enjoys their benefits.

Environmental benefits of using trees are obvious. They moderate climate, improve air quality, conserve water, and harbor wildlife.

Among economic benefits of vegetation are: less money spent in air-conditioning and heating services since trees are natural climate conditioners; less utilization of natural resources to produce energy. As the pollution produced by energy plants is reduced, conservation of the qualities of the environment is made more efficiently.

Nevertheless, parks are sometimes regarded as "magical" savers of city problems. Jane Jacobs mentions some "myths" that are popularly accepted as facts of nature. One of these myths is that parks are "lungs" of the city; the reality is that it would take three acres of woods to absorb the carbon dioxide produced by four people. Other myth is that parks are real estate stabilizers or community anchors; "Parks are not automatically anything" said Jacobs (1961).

When parks are designed without consideration of social issues, or without a clear connection to the existing urban structure, they become another source of social problems instead of an enhancing element for community living. One example of this condition is Philadelphia's original four squares: They were all designed in the same way, with the same expectations, but evolved completely different. Rittenhouse Square became a very successful one, Franklin Square became a place for homeless and vagrants, Washington Square took the function of an office center with problems of crime and vice, and the last one, Logan Circle, was transformed into a traffic island (Jacobs, 1961).

Amos Rapoport (1982) mentions how environmental characteristics can affect the judgment of people. Studies were made asking people to rate some photographs according to their personal impressions. People were situated alternately in an "ugly" and a "beautiful" room. The effect these rooms had over people changed their judgment about the photographs: "it is found that human perceptions and performance change in response to the effects of the characteristics of the two rooms: that is, the environments have some direct effect on the people in them" (Rapoport, 1982: 55).

Vegetation has always been appreciated as a pleasant aesthetical element. Good vegetated spaces could be assimilated to the "beautiful room" of the experiment mentioned by Rapoport, and described above. Good environments, aesthetically pleasant places where people feel comfortable, will affect positively people's attitude towards their surrounding environment and the people on it. In this type of environments people will perform better, and feel better.



Fig. 2.21: Trees condition climate, define open spaces, and promote positive attitudes on people.

Source: Halprin, 1972.

CHAPTER 3. CASE STUDY

3.1 METHODOLOGY

The main purpose of this study is to demonstrate that environments which have physical characteristics that provide residents with better opportunities to develop their social networks, are basically safer than those environments where the physical structure blocks most of the possibilities for developing a community life.

Social aspects have been traditionally seen as the main factor contributing to crime. Research in the social disciplines presents a different approach to understand the dynamics of factors that foster crime, and its eradication. This study is focused primarily on the physical qualities of a place and its importance in criminal behavior; the objective is to promote consciousness of the social responsibility that urban designers and other related professionals have in developing safe environments in which modern society can control crime. Unfortunately social role of design is not as well understood as the functional or aesthetical requirements. Nevertheless the place characteristics, as it has been showed in the previous chapter, are the main factors determining social behaviors and community functioning.

The hypothesis I have presented is first, that communities with stronger ties would control crime in a more effective way than communities in which social interaction is weak or does not exist at all; and second, that physical characteristics of the environment play a main role in the developing of those social networks among community members. Physical environment can also act as a contributing factor of community active participation against crime by: reducing opportunities for crime to occur by facilitating surveillance and control of the area by neighbors, and reducing the fear that impedes people participation in programs or actions against crime.

The methodology I have chosen to prove this hypothesis is to select two urban areas with an appreciable difference in their crime rates, and then analyze the physical conditions of each place in relation to the specific crime activity in each place.

In order to determine the importance of the physical qualities of the environment as crime deterrents, it is important to isolate them from other factors that can affect criminal behavior. Social and economic conditions such as race, age, culture, ethnics, and family composition are aspects that contribute to the rise or to the drop in levels of crime in a given place. For this reason, the two areas selected to analyze must be very similar in their social attributes, leaving only physical aspects as the main factors of differentiation between them.

Crime rates will be obtained from FBI Uniform Crime Reports, and Orlando Police Department Crime Reports. Types of crime that will be considered are mainly what could be described as “crime of opportunity”, leaving out, for the purpose of this study, crimes that are result of a premeditated plan. This is done in order to keep the results of the study applicable to the main purpose of the thesis, a study of the characteristics of the place that facilitate crime activity. As Barry Poyner explained it:

Types of crime that are open to prevention through design or management of the environment tend to be the more “opportunistic” types of crime. Crimes directed at the person include robbery, purse snatches and other

thefts or larceny and some assaults –both violent and sexual assaults. Crimes against property include burglary (breaking and entering) and vandalism (Poyner, 1983).

To choose areas with similar social conditions, I will first study general census data for the area of the city where the study will be done: inner city Orlando. The study will be focused on residential neighborhoods having lower socio-economic levels. Areas of these characteristics usually have the highest crime rates. Areas of study will be neighborhoods because they are the basic geographic units where social functioning is sufficiently complex to obtain relevant data, and because residential use gives to these areas qualities of community interaction that could not be found in commercial or business areas.

First, I will analyze crime reports for the general area. Then, compare the crime data with the population data obtained from the census. Finally, I will determine the two specific neighborhoods for the study. Direct visits to the pre-selected areas are indispensable in obtaining environmental or social data that is not included in census statistical reports.

Since this analysis is directed to the study of the relation between physical environment and crime, the research on site will be based mainly on passive observation of both the place and the interaction between residents and place. Physical conditions of the area will be analyzed considering the theories studied in previous chapters, to find potential factors producing actual crime activity. Statistical and crime data will be used to corroborate that initial observations of the place.

At the end of the analysis, there will be conclusions about the relation between built environment, community, and crime. The expected result, if the theories studied through out this thesis are accurate, will be that neighborhoods where physical environment nurtures social relations are less prone to crime than those where built structure inhibits community interaction.

3.2 SELECTION OF THE STUDY AREA

Orlando, for a variety of reasons, is one of the most informative places to study crime phenomena. First, it is ranked third in crime among the cities in the US (ranking for cities with population over 100,000, 1998 FBI Uniform Crime Report). Second, its cultural diversity due to the high number of people coming from other countries, and recently people migrating from other parts of the United States. Third, Orlando is one of the fastest growing cities in the country, and this particular aspect has imposed on the local authorities new challenges to mitigate the impact of this rapid progress. Orlando has had to adopt clear urban codes that are basically directed to enhance community character in the city.

Florida was one of the first states to pass a law for implementation of CPTED (Crime Prevention Through Environmental Design) in cities' neighborhoods. The State provides special faculties to authorities, and set aside funds for physical and social renovation programs.

The results of this law are noticeable in Orlando, where Mayor Glenda E. Hood has been actively involved with programs to build stronger communities in the city's

neighborhoods. One of these programs is the implementation of Neighborhood Watch Associations, coordinated through the Neighborhood Services Office and the Orlando Police Department. These programs have proved to be a way to prevent crime and strengthen neighbors' interaction. Another important program is the one called "Neighborhood Horizon Strategy", through which residents are encouraged to participate in community workshops to identify the main problems in their neighborhood and propose possible solutions. After a Master Plan is approved, the City establishes a schedule for the realization of the plan, and provides the funds and the professional resources through the Planning and Development Department.

Throughout the theory research done to prepare this thesis, I have been particularly interested in the complex processes that affect neighborhoods in the inner city. Aspects such as social heterogeneity, mixed uses, freeways and other infrastructures breaking down the original layouts, poverty, low investment, lack of community involvement, and many others make of these places a matter worth of analysis, and of obtaining conclusions that could be helpful in the design of future urban developments.

The inner city area in Orlando is defined by clear borders: by the north, State Road 50 (Colonial Drive); by the south, State Road 408 (East-West Expressway); by the west, John Young Parkway; and by the east, the Orlando Executive Airport. All these are major roads of importance to the city's infrastructure, and in this sense are clearly perceived as borders or barriers in the urban layout.

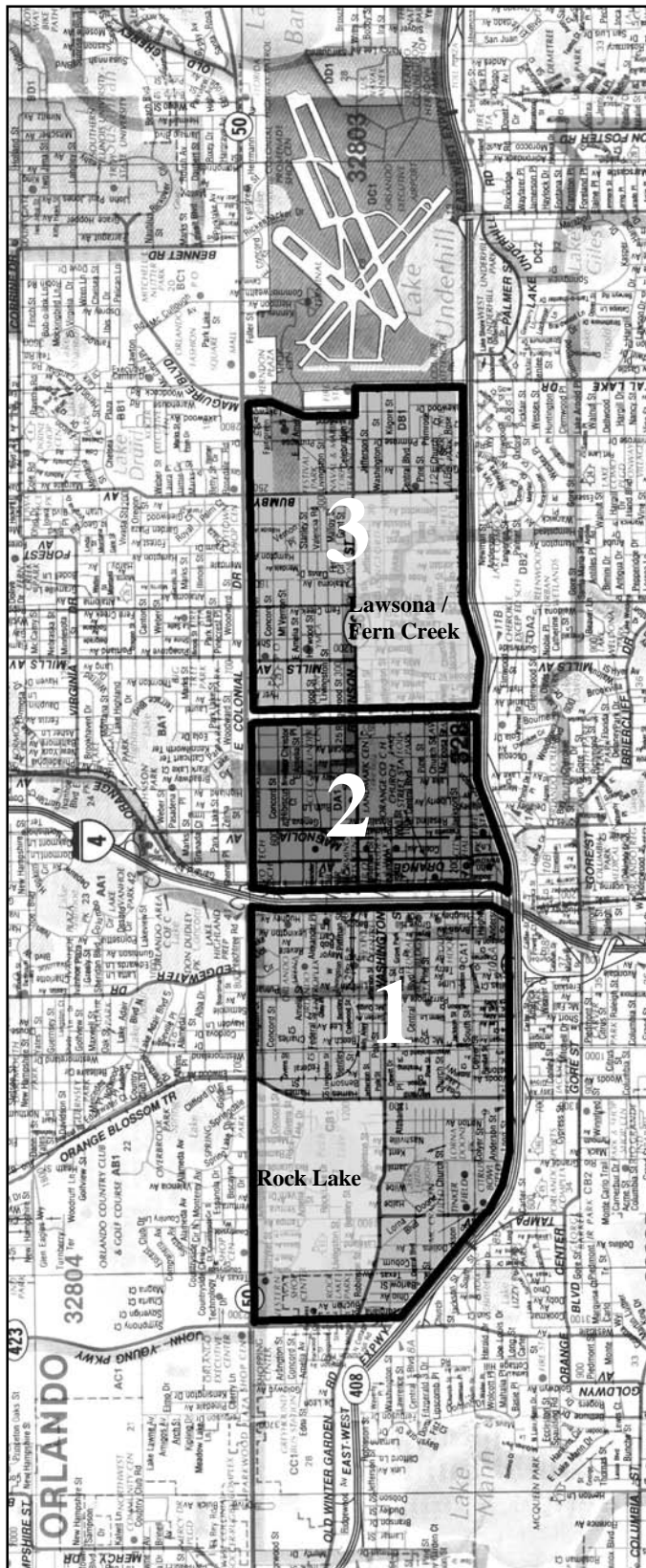
Inside those borders, three main sub-areas can be distinguished by their particular characteristics. The middle zone corresponds to the Central business District, with a mix of office buildings and commercial establishments. At the west of the Central Business District, a low-income residential area, mainly inhabited by black people, and with big problems of crime. At the east, also a residential area, low and middle class neighborhoods, with less crime problems than the residential area at the west.

The Orlando Central Business District acts, in this case, as a buffer zone or divisor between eastern and western residential areas. Its users are mainly people who work there, and visitors or tourists. As part of the revitalization plans for Orlando's Downtown, new dwellings have been created close to the business district. The price of these new housing developments (sometimes multi-story buildings, sometimes renovated traditional houses) makes them only available to higher-income classes. A new social group is forming, and a new environment is being created. These changes to the original social structure make these places not suitable for the purpose of this study. Therefore I have chosen for my study traditional, low-income neighborhoods, which also have suffered all the consequences of city's growing process.

One of the neighborhoods for the study is located in the western side of the inner city. It is a low-income neighborhood, with high crime rates, and in a notorious process of deterioration of its physical and social structures. Its name is Rock Lake.

The second neighborhood is also a low-income area, but with lower crime rates than Rock Lake. It is located at the eastern side of inner city. Its name: Lawsona – Fern Creek.

Both neighborhoods have similar population composition, similar socio-economic levels, both share the same typical problems of inner city neighborhoods, but crime activity is different in each of them. These conditions make of these two neighborhood ideal places to focus my study.



1. Western inner city.
2. Central Business District.
3. Eastern inner city.

Fig. 3.1: Orlando, Florida –inner City.

3.3 ANALYSIS OF THE SOCIAL ENVIRONMENT

Inner city Orlando is a multi-cultural community. West of the Central Business District is an area dominated by a Black population. Residential areas in or around CBD (except the west side) is populated by White people mainly. East of CBD (particularly to the south) has a highly mixed population with a large percentage of Hispanics. Income characteristics are in direct relation, as usual in American cities, with the proportion of minority groups living in a specific area. The lowest income levels correspond to the areas predominantly inhabited by African Americans (west side of Business District), the highest income is in the mainly white neighborhoods (northeast corner of inner city area).

- **ROCK LAKE**

Rock Lake has an estimated population of 1,344 people, with a density of 5.7 inhabitants per acre. Considering only net residential area (without area occupied by the lake), density would be 7.6 inhabitants per acre, which is just over the average for inner city area (7.2 inhabitants per acre).

65.8% of the population in Rock Lake is African American, 24.4% White, 6.77% Hispanic, and 3% other minorities. The Black population, which is the majority in the neighborhood, lives in compact, homogeneous communities where on an infrequent basis one sees people from other ethnic groups. Even though the neighborhood in general is a multi-cultural community, inside the neighborhood, those groups keep territorial characteristics that maintain their cultural homogeneity.

The median age in this area is 37.4, and 46.8% of its population is under 34 years old, which makes of Rock Lake a relatively young community.

Rock Lake community income is predominantly low: 55.3% of the population in the area has a household income below \$25,000. The average household income is \$20,800.

The educational attainment for the population over 25 years of age is as follows: 18.7% has completed only until 9th grade or less, 20.5% between 9th and 12th grade, 29.1% has a high school diploma, and 12.6% with higher education. With almost 40% of the population over 25 without a High School degree, chances for economical improvement among Rock Lake community in general are low, and could be considered as part of a long-term process, depending on the opportunities for better education that the new generations could have. Actually, 11% of the population over 16 is unemployed.

Housing characteristics at Rock Lake area are diverse: 57% of residential units are single-family houses and 43% are multi-family dwellings; 41.6% of all those units are occupied by their owners; 30.9% of the residents have lived in the same house for less than 3 years, 17% between 3 and 5 years, 10.9% between 6 and 9 years, and 41.1% for more than 10 years. This long term of residence in the same dwelling is surprisingly different to what is generally characteristic in an inner city area, where 44.6% of the residents have lived in the same dwelling for less than 3 years, and only 26.2% for more than 10 years.

- **LAWSONA-FERN CREEK**

Lawsona-Fern Creek's population is 2,007 inhabitants, with a density of 9.96 inhabitants per acre, which is relatively high compared with the average for the total inner city area, which is 7.2 inhabitants per acre.

The ethnic composition of the neighborhood is 66.37% White, 16.34% Hispanic, 12.21% African American, and 5.43% other minorities. Most of Black and Hispanic populations are concentrated at the southern portion of the neighborhood, at Reeve's Terrace (a public housing development). In the neighborhood's northern portion there is a population of a higher socio-economic level. It is there is where most of Whites live. Langford Park, located in the middle, acts as a buffer dividing these two communities.

Practically half of Lawsona-Fern Creek's population is under 34 years old: 25.4% between 0 and 17 years old, and 24.2% between 18 and 34. The median age is 35.2, and the smallest group is between 55 and 64 years old, which represents only 6% of the total population. It is, in conclusion, a very young community.

Median household income in the neighborhood is \$30,992, and the biggest group (36.1% of the population) corresponds to a range between \$25,000 and \$50,000.

30.2% of Lawsona-Fern Creek's population over 25 years of age has college degrees, and 17.7% has some college education without a degree. 24.5% has not finished high school. Only 3.9% of population over 16 is unemployed, a low proportion compared to the average in inner city, which is 6.9%.

Lawsona-Fern Creek has a balanced relation between single-family and multi-family housing units: 53.4% of residential units are single-family houses, and 46.6% are multi-family dwellings; 31.9% of all housing units are occupied by their owners; 19.7% of all residents have moved there between the last three to five years, and 42.4% have done the same in the last 2 years; this shows a progressive interest in Orlando residents for living in downtown areas.

- **COMPARISON**

The most noticeable difference between social characteristics in Rock Lake and Lawsona-Fern Creek has to do with ethnic composition. While Rock Lake is a community dominated by African Americans, White people are the main population at Lawsona-Fern Creek. There is a difference also in educational attainment: in Rock Lake, 40% of population over 25 does not have a high school degree; in Lawsona-Fern Creek, 47.9% has education over high school level. The higher educational attainment in Lawsona-Fern-Creek is congruent with its higher income. Nevertheless, both neighborhoods can be catalogued into a same socio-economic level, as low-medium level areas

Residents' involvement with community issues is a matter hard to determine or qualify. One way could be through comparing the number of formal neighborhood associations: Rock Lake has two neighborhood associations, Lawsona-Fern Creek has three. Rock Lake has eight neighborhood watch groups, Lawsona-Fern Creek has thirteen. The slight difference between numbers of neighborhood associations or groups in the two areas shows Lawsona-Fern Creek being a community more involved with the neighborhood issues.

The other way to judge community involvement is through a direct visual assessment of the area. In this sense, Lawsona-Fern Creek appears to be a better

organized community: there are not many signs of dereliction or vandalism, front yards are very well maintained in general, streets and buildings' facades look clean, and people use public spaces, streets and parks. There are even periodical neighborhood parties organized in communal halls during weekends or other special events (see fig. 3.4a).

Rock Lake does not have the same communal activity. Streets look desolated most of the time (see fig. 3.4b), with exception of bordering roads that are mainly commercial, and consequently busy most of the time, not necessarily by neighborhood residents, but for residents of other areas in the city. The community lacks meeting halls and open spaces for public use; this is a main concern among Rock Lake neighbors, and has even been expressed as a priority in their plan of development (Rock Lake Horizon Plan, City of Orlando 2000).

Social aspects that are similar between both neighborhoods are: first, the presence of two main socio-economic groups occupying different areas into the neighborhood; and second, high use of bordering streets by outsiders, due to their commercial character and their importance as city vehicular arteries.

Since crime in a neighborhood could be either committed by residents or outsiders, specific social characteristics of residents cannot be assumed to be the causes of criminal activity in the area. The analysis of the social characteristics of the residents in a particular area is important to understand the reasons for social participation or apathy in neighborhood issues, which could lead to create defensible spaces that discourage crime.

Table 3.1: Social characteristics in Rock Lake and Lawsona / Fern Creek.

SOCIAL CHARACTERISTICS	ROCK LAKE	LAWSONA / FERN CREEK
POPULATION	1,344	2,007
DENSITY (People/Acre)	5.7	9.9
BLACKS	65.80%	12.20%
WHITES	24.40%	66.40%
HISPANICS	6.80%	16.30%
OTHER RACES	3.10%	5.40%
MEDIAN AGE	37.4	35.2
AVERAGE HOUSEDHOLD INCOME	\$20,800	\$30,992
SINGLE FAMILY HOUSES	57%	53%
MULTI-FAMILY	43%	47%
OCCUPIED BY OWNER	41.60%	31.90%
OCCUPIED BY RENTER	58.40%	68.10%



Fig. 3.2a: Rock Lake's lowest income areas.



Fig. 3.2b: Lawsons / Fern Creek's lowest income area.



Fig. 3.3a: Low-Income housing at Givens Street, in Rock Lake.



Fig. 3.3b: Reeve's Terrace: low-income housing in Lawsona –Fern Creek.



Fig. 3.4a: Community party at Langford park, in Lawsona-Fern Creek.



Fig. 3.4b: Fences impel residents' use of open spaces at Rock Lake.

3.4 ANALYSIS OF THE PHYSICAL ENVIRONMENT

In analyzing physical elements that can act as cues for social functioning in the place, it is important to remember the distinction made by Rapoport between fixed, semi-fixed and non-fixed features and what they can represent: Fixed features, such as walls, floors, streets, and buildings are elements clearly controlled by codes and designers, and communicate meaning primarily in traditional cultures. Semi-fixed features such as furniture, street signs, plants, and clothing are elements people have control over; they tend to communicate more than fixed elements, since they can be personalized. And Non-fixed elements are precisely the inhabitants of the place; they communicate meanings through distances between them (closeness or apartness), movements, body postures, and other non-verbal behaviors; although their interpretation can be not as precise as the other two types of features, non-fixed features are of main importance in understanding a place and the effect of these features over residents and users in general.

▪ ROCK LAKE

Situated at the west end of what could be considered today the Orlando's inner city area, Rock Lake is a heterogeneous community located within a neighborhood clearly defined by heavy traffic city streets.

As it commonly happens in inner city neighborhoods, Rock Lake is a mix-use area, where residential, institutional, commercial and industrial zones are sharing a relatively small area. The residential zone is located mainly within the central core of the neighborhood. Commercial, industrial (light), and other uses are located in the areas adjacent to primary vehicular streets bordering the neighborhood (See fig. 3.6a and b).

The Rock Lake neighborhood is organized around a 60 acres lake. Even though the neighborhood is named after the lake, this natural feature is completely ignored by the neighborhood's physical layout. Residential lots back up to and circle the lake. Small leftover areas without specific function or users also surround the lake. Access is practically neglected to the public and neighborhood residents in general. The lake could be used as a park or open space amenity; but in Rock Lake, the lake open area, without a planned use, is a barrier rather than a linking element for the neighborhood (See Fig. 3.7).

The eastern border of the neighborhood is Orange Blossom Trail, one of the Orlando's most heavily used city streets. The section of Orange Blossom Trail adjacent to Rock Lake is known for its prostitution and drug dealing problems. Even so, the neighborhood's inner space is completely open to this avenue, and open also to the social problems already present there. This failure gets worse with the inclusion of commercial and industrial buildings between the residential zones and Orange Blossom Trail. Physical characteristics and specific uses of these buildings create a threatening aspect for the safety of residents and visitors. Dereliction, open spaces without effective surveillance, and lack of connection due to undeveloped or empty green areas are characteristics that attracts many undesirable people from areas nearby.

A residential block between West Robinson Street and Washington Street is particularly affected by features of the physical environment that can promote crime. This particular area is bordered by derelict warehouses and empty lots to the west, and the unused open area bordering the lake to the north and west. The area is also close to, and directly accessible from two high traffic roads (Orange Blossom Trail and Washington

Street). Each of the zones bordering this residential area promote criminal activity, either by neglecting the possibility of having an effective visual and functional control over public spaces, or by allowing a permeability of the private residential area into the highly used streets bordering the neighborhood (see figs. 3.5 and 3.8).

Although learning or community centers are often used to effectively create sense of community in a neighborhood, in Rock Lake they are planned in such a way that they do not promote community association. The Rock Lake elementary school is practically detached from the neighborhood. The school is located at Tampa Avenue, a high traffic street that acts as a barrier between the school and residents, while posing as a potential danger to kids and parents. The back of the school is bordered by an empty lot and a natural area creating another unsafe factor for the school community.

Many parents go to the school each day to pick up their kids, a common activity that could be a positive factor for neighbors' social life. If the streets and places around the school were attractive enough to encourage more extended use of public space, providing more chances for people's interaction, new friendships could arise. The specific location and isolation of the school from its surroundings undermines the possibilities for this interaction between residents.

The other learning center in the neighborhood is located at the corner of Orange Blossom Trail and Colonial Drive, a no-formal education center. This building has been designed to offer an easy entrance by car, but lacks of pedestrian connection to the neighborhood itself, orienting blank walls to residential areas. Additionally, leftover, empty areas behind the building are cause of physical dereliction in the area and potential crime (see fig. 3.9a and b).

Just west of Tampa Avenue is Rock Lake Park. This park is not more than a natural area without any recreational purpose or facilities. The untamed, overgrown vegetation at its borders, fences, and surrounding houses make the place inaccessible for residents and other potential users. This condition of enclosure makes this open space a source of fear, an unsafe factor not only for the residences close by, but also for the whole community (see fig. 3.7).

The western limit of the neighborhood poses a unique problem to the community. It corresponds to a big, undeveloped area surrounded by chain link fences, warehouses, and residences' backyards. Many of the internal neighborhood streets terminate there. These dead end streets not only disrupt the community network, but also become focus of potential crime and vandalism. Houses bordering this empty land are those with more protection devices, such as fences, gates, walls, etc.

Colonial Avenue, the northern limit of the neighborhood, is characterized by commercial and industrial uses. There is not an efficient transitional area between this commercial and industrial zone and the residential neighborhood. Houses directly face the back yards, service areas and parking lots of commercial and industrial buildings. Fences and walls are symbols of the residents' feelings of fear and discomfort. Dead end streets in this area are threatening factors contributing to vandalism and crime.

Some aspects of the actual layout could be positive elements to promote neighbors' interaction, social networks, and safety in the area. For example at the north, where the residential character is consolidated, community has begun to include some special features in order to improve territoriality and promote civic pride among



Fig. 3.6a: Orange Blossom Trail: commercial corridor and high traffic road.



Fig. 3.6b: Industrial zone at North Texas Avenue



Fig. 3.7: Public access to the lake is blocked by fences, buildings, and undeveloped lots.



Fig. 3.8: Rock Lake: warehouses and industrial buildings in direct contact with residential zones.



Fig. 3.9a: A community-learning center located at the corner of Orange Blossom Trail and Colonial Drive, easily accessible by car.



Fig. 3.9b: The same community-learning center does not offer any possibilities for pedestrian access from the neighborhood. An empty lot isolates it from the community



Fig. 3.10: Lack of transitional areas between commercial and residential zones. Houses back yards are directly in contact with industrial patios and commercial warehouses.



Fig. 3.11: Arlington Street is beautifully landscaped, but lack of sidewalks or transitional areas between houses and public areas discourage pedestrian use of the street.

residents. Arlington Street, which runs along the middle of this zone, is kept clean and carefully landscaped and at its east end, a symbolic gateway has been included. The failure in this intention for upgrading the qualities of the place is not having considered pedestrian circulation to promote use and appropriation of the public space.

▪ LAWSONA-FERN CREEK

This neighborhood is located at the east side of Orlando's inner city area. Its limits are clearly defined by high traffic roads on its four sides; East Robinson Street is the neighborhood's north limit, Bumby Avenue by the east, Summerlin Avenue by the west, and the East-West Expressway by the south.

The predominant land use of this neighborhood is residential, with commercial and business uses along main streets bordering it (see fig. 3.12). The central area is dedicated to recreation and natural preservation. The residential area consists of three different sub-areas: north of Central Boulevard corresponding to an upper socio-economical level, south of central boulevard with a predominant lower class population, with a portion of it (between Langford Park and East-West Expressway) occupied by very-low income population living in a public housing development.

The Carl Langford Park occupies a big portion of the neighborhood's central area (see fig. 3.14). At difference with Rock Lake, most of its sides have a positive visual control by residences around. The park is easily accessible by any of its sides, with exception of its west side, which is blocked by residences' backyards. There is also a possibility for residents' surveillance due to specific characteristics of the houses such as back porches and back windows, and well-suited back yards that promote residents' use of these private spaces. The topography is also a positive factor to offer surveillance over the park. The park is situated lower than the houses' level, providing residents with visual control of the public places below (see fig. 3.15).

Located in the north border of Carl Langford Park is a community center. This facility makes an excellent link between residential and recreational areas. It also promotes use of the park and increases control over this area. Periodical festivities and special meetings are held there, giving people a chance to foster social relations and become familiar with their neighbors. Special furnishing in the park increases its use by residents. These furnishings include picnic tables and kiosks, playgrounds, trails for exploring nature, benches, bathrooms, sports' courts, and grass areas for multiple use purposes (see fig. 3.14).

A critical area for safety purposes is Dickson Azalea Park, along Fern Creek. Topography and dense vegetation makes this area difficult to control. But two special measures have been taken to counteract this situation: the one is allowing public access to the park only during daylight hours and closing the park at night, the other is to create a beautiful and didactic trail along the creek, attracting people to use the park, and giving reasons for residents along the park to open their houses to the public space, as a special feature worth to contemplate (see fig. 3.16).

The size of Langford Park could represent an inconvenience for its surveillance, but this problem is solved in part by using sparse vegetation at its periphery, allowing distant views and control over the park. Nevertheless, its west side continues to be a problem because it is bordered by back yards of private houses without any public access

from the surrounding area. Lack of users in this portion of the park and a poor visual control from residences around create a scenario suited for crime.

Lake Lawsona Park is managed in a very different way than Rock Lake. Lake Lawsona is open to the residences around in most of its periphery. Some spaces have been intentionally furnished to be used as passive recreation areas; benches, beautiful planting and special materials reinforce this purpose (see fig. 3.17).

The streets bordering the neighborhood are predominantly conformed by commercial buildings. The transition between residential and commercial zones is not so much in conflict as in Rock Lake. Summerlin Avenue, at the west side of the neighborhood presents less conflict with the adjacent residential area first, because this street presents a mix between commercial and residential uses, particularly south of Central Boulevard (see fig. 3.13b); and second, because most of the commercial activity is according to the neighborhood's needs: restaurants, shops, and groceries' stores. Robinson Street, north of the neighborhood, has also a predominantly residential character, but it is rapidly changing due to a progressive increase of business along the way. Bumby Avenue, at the east, is the most problematic of all roads bordering the neighborhood; it is predominantly commercial, offering services to a wider population because of its characteristics as a main north-south route crossing downtown, and as an entrance to East-West Expressway. The highly public character of Bumby Avenue and the lack of transitional spaces between this street and the adjacent residential create particular conflicts related to undefined territoriality and weak access control to the neighborhood.

The east-west expressway suppresses any possibility for an effective control over houses located adjacent to it (see fig. 3.18). Land along highways gets devaluated and it is always difficult to successfully use for residential projects. As frequently happens, land bordering expressways in modern cities are either used as natural buffers or, as in this case, for public housing or low-income developments. The reasons why these areas are not suitable for residential use are obvious: noise, pollution, blocked views, potentiality for vandalism and crime, and low esthetic conditions.

Trinity United Methodist Church, at the southeast corner of the neighborhood, offers a good buffer and gradual transition between expressway and residential area. It is a complex conformed by open green areas, offices, residences, playgrounds and sports' courts. Unfortunately, the potential to become a center of activity and social interaction for neighbors is practically lost due to the fence that borders the complex. The fence also blocks any potential connection between church grounds and adjacent residences.

Reeve's Terrace, as any other public housing development, is deeply affected by particular social characteristics such as poverty, low education, loss of social and cultural values and high levels of unemployment. But even with all these negative factors, Reeve's Terrace (located at the south of the neighborhood, between Langford Park and East-West Expressway) is an exemplary project for many reasons. For instance: the houses layout is completely open, permitting communal use both in front and back yards (see fig. 3.19). The central area is occupied by a park, with a well-equipped playground, bordered by a low, open fence that permits a clear supervision from houses around the park (see fig. 3.20). The park is easily accessible from any place in the project. There is a community hall located in the central area of the development. The building is well landscaped and open to the view from the surrounding houses. Parking lots are situated in



Fig. 3.13a: Commercial activity at Bumby Avenue.



Fig. 3.13b: Multi-family housing at Bumby Avenue



Fig. 3.14: Langford Park: picnic tables and other amenities.



Fig. 3.15: Back porches and balconies provide places for surveillance over open public areas.



Fig. 3.16: Richly landscaped areas at Fern Creek.



Fig. 3.17: Lake Lawsona is open for public enjoyment.



Fig. 3.18: East-West Expressway creates a barrier at the south limit of the neighborhood.



Fig. 3.19: Reeve's Terrace completely open layout makes interaction between residents easier.



Fig. 3.20: Reeve's Terrace: playground is open to view from surrounding residences.



Fig. 3.21: Parking areas at Reeve's Terrace.

front of the main entrances to the residential units, permitting an easy control and surveillance. Porches in front of the buildings form transitional spaces between public and private areas and encourage use of public space (see fig. 3.21). Houses bordering Langford Park have a clear view of the community space, which also offers many different services to the community. Houses located next to Fern Creek are separated from it by a transitional open space. The front façade of the homes face the creek, offering surveillance of that space.

Some city institutions, such as Orlando Housing Department, and the Orlando Police Department have offices inside the complex. The permanent presence in the neighborhood of these governmental institutions not only offers another reason for safety, but also makes residents feel that city authorities are giving special attention to their needs, and will effectively work to solve their problems.

Although Lawsona-Fern Creek is particularly exposed to many different aspects of concern about safety, most of them have been ameliorated by specific qualities of its built structure. Nevertheless, there are some weak points that create environments prone to criminal activity, and this will be studied more fully in the next chapters.

3.5 RELATION BETWEEN CRIME AND SOCIAL ENVIRONMENT

Orlando, with more than 13,446 crimes for every 100,000 inhabitants, is among the five most dangerous cities (with population over 100,000 people) in the United States (1998 FBI Crime Reports). Nevertheless, it is important to consider that Orlando also receives more than 800,000 visitors per week (EDC, 2001); although this transient population does not count for crime rate calculations, its presence results in special situations that can contribute to higher crime rates.

One of the areas with more concentration of crime in Orlando is the inner city; specifically, neighborhoods at the west side of the Central Business District. These neighborhoods have higher crime rates than those at the east side. Neighborhoods with the highest crime rates in this particular area are Callahan and Holden-Parramore. Both neighborhoods are populated by a large majority of African Americans. Inner city's west area also has one of the lowest household incomes in Orlando: \$16,765. From this specific data it could be suggested that crime rate is higher where poverty and social minorities concentrations are higher.

Because of these clear differences between inner city's west and east sides, I decided to base my research in one representative neighborhood of each area. In this order of ideas, Rock Lake represents the west side, where crime rates are higher and social characteristics, such as poverty and a large minority population, could be taken as direct causes of crime in the place. Lawsona-Fern Creek represents the east side, which in general presents better income levels, better educational attainment and less crime than the west side. Lawsona-Fern Creek is particularly interesting to be used in a parallel analysis with Rock Lake because of its similar social characteristics. Both communities are composed of a larger, low-medium class group, and a smaller lower class group living in public housing or other dwellings.

Both Rock Lake and Lawsona-Fern Creek present the highest number of crime precisely in the areas where public housing or very low-income dwellings are located. In Rock Lake, more than 200 crimes reported to the police during the year 2000 occurred in

the area next to the corner of North Orange Blossom Trail and Washington Street, and more than 140 crimes in the north east corner of the neighborhood; these are precisely the areas where the lowest income-level residences are located (see fig. 3.22a).

Most crimes in Lawsona-Fern Creek happened in Reeve's Terrace, a public housing development located south of Langford Park. Just in this area more than 120 criminal acts were reported to police. 56% of those crimes occurred at Victor Avenue, the main entrance to the development (see fig. 3.23a).

It is usually assumed that certain social characteristics: poverty, large presence of minority groups, young population, numerous single-mother households, all have a direct relation with crime rates in a place. Following these criteria, I am going to analyze if this relation exists in the two neighborhoods (Rock Lake and Lawsona-Fern Creek).

All population data to be presented in this analysis comes from US Census 2000; all crime data has been extracted from the 2000 Orlando Police Department's reports. Not all cases reported to police have been used in this analysis, only those that could be considered as crimes of opportunity (burglary, assault, other larcenies, stolen property, rape, robbery, drug related crimes, and vandalism). Out of this analysis are those crimes that are not directly committed against a specific person or property, or could not be considered as opportunistic crimes (traffic accidents, accidental injury, suicide, prostitution, DUI, missing persons, weapons violation, and liquor law violation).

The area with most crime at Rock Lake is the east end (next to Orange Blossom Trail), between Colonial Drive and Washington Street (see fig. 3.22a). Approximately 370 crimes in this area were reported to police during the year 2000. With a population of 422 people, this represents a rate of 88 crimes for every 100 people.

The most number of crimes at Lawsona-Fern Creek were located at Reeve's Terrace area, south of Carl Langford Park (see fig. 3.23a). 143 cases were reported to police during the year 2000. The population in this specific area is 524. The resulting crime rate is 27 crimes for every 100 people.

In Rock Lake's area of most crime there is a balance between White and Black population (44% Whites, 40% Blacks, and 12% other races), with exception of the block defined by Robinson, Washington, Kent, and Nashville streets (south end of Rock Lake), which is 100% Black population. In Lawsona-Fern Creek's most crime area, 40% are Whites, 39% are Blacks, and 21% belong to other races (from this total, 43% are Hispanics).

The area with least crime in Rock Lake is that defined by Arlington Street, Amelia Street, Tampa Avenue, and Rio Grande Avenue (see fig. 3.22b). In this area there is majority of Blacks, who represent 67% of the population; Whites are 33%, and from the total, Hispanics are 2%. The area with least crime in Lawsona-Fern Creek, during the year 2000, is that delimited by Central Boulevard, South Street, Thornton Avenue, and Fern Creek (see fig. 3.23b). In this area there is a clear majority of Whites (91%) over Blacks (5%); Hispanics only count 7% from the total population.

From this first analysis, it can be concluded that neither in Rock Lake, nor in Lawsona-Fern Creek, race can be considered as a determinant for crime. While both Rock Lake's and Lawsona-Fern Creek's most dangerous places have a balance between Whites and Blacks, the safest area in Rock Lake is dominated by Blacks, and the safest area in Lawsona-Fern Creek is dominated by Whites.

Nevertheless, this first analysis shows that social homogeneity in population is a characteristic of safer places, and that mixed populations are characteristic of areas with more crime.

The average age in Rock Lake's highest crime area is 35 years old. The average age in the same neighborhood's safest place is 41 years old. The same relation is found in Lawsona-Fern Creek: the highest crime area has an average age of 22; in the safest place the average age is 35.

The conclusion of this analysis is that the places with most crime have the lowest average age, and the places with least crime have the highest average age.

The next myth to consider is that areas with the most number of single-female householders are more prone to crime. In Rock Lake, the highest crime place has a larger proportion of single-female households (20%) than the safest place, in which only 8% of all households are single-female's. In Lawsona-Fern Creek's highest crime area, 46% of all households are single females'; but in its safest area, only 14% are single-female's households. In conclusion, areas with the biggest proportion of households headed by single females present more crime than those with a lower proportion.

And finally, it is assumed that places where owners are majority over renters tend to be safer than those where renters are the biggest percentage. In Rock Lake, the most dangerous place has a relation of 46% of houses occupied by its owner against 54% by renters; the safest place, by the other hand, has a relation of 86% occupied by owners and 14% by renters. In Lawsona-Fern Creek there is the same relation: the most crime place has a proportion of 12% of houses occupied by owners against 88% by renters; the safest place's proportion is 56% by owners and 44% by renters. Based on these results, it can be concluded that places where owners outnumber renters are safer than those where the proportion is inverse.

Table 3.2: Relation between crime and social characteristics at Rock Lake and Lawsona-Fern Creek.

SOCIAL CHARACTERISTICS	MOST CRIME AREAS		LEAST CRIME AREAS	
	ROCK LAKE	LAWSONA-FERN CREEK	ROCK LAKE	LAWSONA-FERN CREEK
POPULATION	422	524	200	195
BLACKS	40%	39%	67%	5%
WHITES	44%	40%	33%	91%
HISPANICS	8%	44%	2%	7%
HOUSEHOLDS	114	191	79	107
HOUSING UNITS	121	199	82	109
OCCUPANCY (OWNER-RENTER)	46-54	12-88	86-14	56-44
MEDIAN AGE	35	22	41	35
FEMALE-HEADED HOUSEHOLDS	20%	46%	8%	14%



Fig. 3.24a and b: Rock Lake: industrial buildings and warehouses at the corner of Orange Blossom Trail and Washington Street, one of the areas with highest crime rates in the neighborhood.



Fig. 3.25: Lawsona-Fern Creek: Multifamily housing at Reeve's Terrace, the area with the highest crime rates in the neighborhood.

3.6 RELATION BETWEEN CRIME AND PHYSICAL ENVIRONMENT

In general, Rock Lake has a higher crime rate than Lawsona-Fern Creek. Based on the information described in the previous chapter, Rock Lake's crime rate for the year 2000 was 64 crimes for every 100 inhabitants; in Lawsona-Fern Creek, for the same year, it was 22 crimes for every 100 inhabitants. As noted before, social characteristics of both neighborhoods are slightly different, but still they can be grouped into a same socio-economic level. Median household income in Rock Lake is \$20,800 and in Lawsona-Fern Creek is \$30,992. Both neighborhoods present areas of very low-income levels among a general area of medium-income level.

The analysis of the social environment showed the relation between certain population characteristics and the amount of crime in a specific area. But even though those relations keep consistent in both neighborhoods, the total quantity of crime in Rock Lake is considerably higher than that in Lawsona-Fern Creek. So there must be factors other than social characteristics in those places that produce this evident difference.

One of the differences between both neighborhoods is the character of their perimeter roads. In Rock Lake neighborhood, Colonial Drive, Orange Blossom Trail, and Washington Street are almost exclusively for commercial or industrial uses, and are main arterial of the city's vehicular transportation system. In Lawsona-Fern Creek the bordering streets (Robinson Street, Bumby Avenue, and South Street), although they are ways of high traffic and are mixed uses areas, still present a balance between residential use and commercial, business, or industrial uses.

In Rock Lake, most crime happens on border roads defining the neighborhood: Colonial Drive, Orange Blossom Trail, and Washington Street. This situation is in some way expected due to the commercial nature of the streets, and to their high flow of vehicles and pedestrians from other places of the city. The main problem is that this crime is reaching interior areas of the neighborhood, as in the area between Arlington and Givens Streets (in the northeast corner), and the block delimited by Washington and Robinson Streets (at the southeast). Both areas have two similarities: very-low income communities, and proximity to places having physical characteristics that favor crime (see fig. 3.26).

In the northeast area of Rock Lake, the place affecting it negatively is the empty lot between Springdale Road and Orange Blossom Trail. Overgrown vegetation, dereliction and garbage are signs of the character of this place: a no man's land, a place without specific function or users. The situation is worse due to its location between a high traffic street and a very-low income development. The Rock Lake community has already expressed its concern about this particular place in its "2000 Horizons Plan" a development plan created with the help of Orlando's Planning Department. They even suggested that the place become a public park for community use.

Givens Street, at the same northeast area, has the highest crime rate inside the neighborhood (without considering bordering streets). This particular street is already vulnerable due to the social characteristics of its population, and this vulnerability is enhanced by the physical layout. It is directly connected to a commercial street, with high traffic of cars and people from outside the neighborhood, and flanked by two empty lots. One of the housing projects at Givens is open to the street; the other, at front, is fenced, discouraging use of the street by residents. The enclosed housing complex is precisely

next to one of the empty lots; this is maybe the reason why it has been fenced (see fig. 3.28).

Arlington Street, in the same area, is a beautifully landscaped street with a higher socio-economic level population. But this street also presents a problem of crime (24 crimes were reported to police during the year 2000). As noted in the physical analysis of the place, in a previous chapter, this street lacks features that encourage use by residents. There are no sidewalks, no meeting places or furnishings. There is a considerable vehicular traffic since this is the only way crossing the neighborhood directly connecting Tampa Avenue and Orange Blossom Trail (see fig. 3.29).

The other area with high crime rates in Rock Lake, the southeast corner of the neighborhood, is negatively affected at its east side by a commercial and industrial complex. This commercial zone has open parking spaces and patios without any surveillance. Vagrants usually wander by this area and it is feared at any time of the day. At the north the lake area, without casual surveillance or control by neighbors, becomes another factor affecting the safety conditions of the residential area adjacent to it. And finally, the direct connection of this area to Washington Street and the proximity to Orange Blossom Trail, commercial and industrial streets with a high vehicular traffic, permits that the criminal activity present on these corridors penetrates easily into the inner residential areas.

The safest place in Rock Lake is conformed by the innermost blocks in the neighborhood. Because of its location, impact from commercial and industrial uses in the periphery is filtered, increasing residential character of the place. Vehicular traffic in these roads is almost exclusively local, and its volume is low. Even though there is a lack of sidewalks, use of streets by residents is easier due to the low vehicular traffic and surveillance potential from both sides of the streets. Houses also have a direct relation with the exterior, and gardens, as transitional areas, are better maintained and used than the rest of the neighborhood.

Lawsona-Fern Creek has, in general, a lower crime rate than Rock Lake, but there is an area in particular that presents the highest rates; it is Reeve's Terrace, a public housing complex. Even though social characteristics of the population in the area can affect crime rates negatively, there are also physical features of the place that could be considered as negative factors and promoting criminal activity.

Although the area is next to a big, open space (Langford Park), crime in this section is low, what can be a result of the general layout of the park, which permits an easy visual control from residences around, and encourages use by neighbors. It is in Victor Street and Reeves Court where most of the crime happens¹. Both streets are the main entrances to Reeve's Terrace, and connect it directly to South Street (a high traffic road). South Street is the main access to the East-West Expressway in this section of the city, which is a negative aspect affecting control over the residential area and creating permeability on its territorial character (see fig. 3.31).

Bumby Avenue, at the east border of the neighborhood, is Lawsona-Fern Creek's most dangerous street. As in Rock Lake, the commercial character of the street and the

¹ Ninety crimes on both streets were reported to police during the year 2000 (Orlando Police Crime Reports).

high vehicular flow are main contributors to crime. But while at Rock Lake crime has started to penetrate into the inner residential areas of the neighborhood, in Lawsona-Fern Creek the crime has been contained into the commercial corridor, without affecting considerably the adjacent residential areas. This is basically because of two qualities: first, there is a better balance between commerce, offices, and residential uses; and second, the residential blocks next to Bumby Avenue are compact areas where residences have a direct relation to the public space. In this sense, control of the place by neighbors is easier and constant.

The safest place in the neighborhood is the area at west of Reeve's Terrace, between Central Boulevard and South Street, Thornton Avenue and Lawsona Boulevard (see fig. 3.23b). Although the area is close to the East-West Expressway, additional residential blocks between the highway and the neighborhood create a buffer zone, and help to keep the private character of the residential zone. This character corresponds also to the residents perception of territoriality and control over the area, which promotes safety.

This particular area is organized around a public use park, Lake Lawsona. The park is carefully maintained, and highly used by the community. Use and care of this open space not only discourages crime, but also promotes community involvement in neighborhood issues, one of those being safety. Involvement of residents with their neighborhood is also noticed through the well-maintained gardens and facades. The use of porches in front of residences as a way of appropriation of public space is an indicator of residents participation in the creation of a sense of place. Thru city traffic is discouraged from the area by the local streets layout. These streets are not connecting directly to main city roads, thus keeping a private, residential character. As vehicular traffic is low, and houses are in open relation with the exterior, streets acquire the same character that any park or communal use area. The streets become recreational, social spaces (see fig. 3.27).

As a unit, Lawsona-Fern Creek's physical structure acts more efficiently to control crime than Rock Lake's. Negatives aspects of Rock Lake are basically first, neglecting public use of open spaces, which become in this sense no man's territories. Second, not including transitional spaces between residential areas and commercial and/or industrial zones, which produce a lack of character and territorial appropriation of the place. On the contrary, positive aspects of Lawsona-Fern Creek are first, encouraging public use of open natural spaces and streets, offering control and appropriation of the place by residents. Second, a balanced mix of commercial and residential uses in its bordering streets, and compact residential blocks adjacent to them. These characteristics minimize conflictive situations that could result from highly public activity intruding into the private, residential areas. This type of layout facilitates the definition of a neighborhood's territoriality.



Fig. 3.28: Rock Lake: Low-income housing at Givens Street.



Fig. 3.29: Rock Lake: Empty lot at the east end of Arlington Street.



Fig. 3.30: Rock Lake, residential area affected by adjacent commercial and industrial activity.



Fig. 3.31: Lawsona-Fern Creek, Reeve's Terrace open to South Boulevard, entrance to East-West Expressway.



Fig. 3.32: Lawsona-Fern Creek safest area.



Fig. 3.33: Lake Lawsona Park is part of the neighborhood's safest area.

3.7 CONCLUSIONS

Certain population characteristics such as poverty, social heterogeneity, and populations with large proportions of youths, single-female householders and renters were commonly found in areas of the neighborhood where crime rates were higher.

Even though the population in Rock Lake is in a socio-economic level comparable to that of Lawsona-Fern Creek, there is an ample difference in crime rates between those two neighborhoods. This indicates that social factors influence, but are not the only elements determining crime susceptibility on an area.

Lawsona-Fern Creek has considerably lower crime rates than Rock Lake. Analysis of the social characteristics does not show such a big difference between both neighborhoods' population. Analysis of the physical characteristics of neighborhoods, on the other hand, makes evident certain differences that, as it has been presented in previous chapters, can either favor or discourages crime.

The main difference between both neighborhoods is how residential areas are related to or isolated from other uses' areas. Rock Lake totally blocks any possible relation between dwellings and its central open natural area. The lake area could be used as a recreational or communal space that would promote social interaction. Instead, the area has been enclosed by fences, back yards and undeveloped land. In this way, the natural area becomes an ambiguous space without territorial definition, clearly prone to criminal activity and propitiator of fear. Lawsona-Fern Creek appropriates the natural zone around which the neighborhood is laid out, and creates a public park for residents' sake. Constant use of the public space discourages crime and promotes community.

Other difference between Rock Lake and Lawsona-Fern Creek is how each neighborhood deals with the conflicting relation between highly commercial or industrial zones and the residential zone. In Rock Lake the relation between those two different use-zones is conflicting because of a lack of transitional areas between residential and commercial areas. It fails when open, undefined areas (empty, undeveloped lots) or highly vulnerable areas (public housing or very-low income dwellings) are in direct contact with those anonymous, highly public streets. In Lawsona-Fern Creek, although it does not present transitional spaces between commercial streets and residential areas, the conflict is minimized by the mixed-use character of the streets. Residential use in these commercial streets promotes constant control over the area by residents. Also, residential zones close to commercial streets are very compact, with houses open to the public space; this creates a safer atmosphere than those undefined residential areas at Rock Lake.

Nevertheless, there is a failure in Lawsona-Fern Creek layout when a public housing development, an area that is highly vulnerable to crime due to the social characteristics of the population, is placed immediately next to a high traffic street, at the border of the neighborhood, and close to an Interstate road. This location weakens territorial definition of the residential area, and opens an easy access for intruders, and an easy escape for criminals.

The vulnerability of a place to be affected by crime is determined by economic and social characteristics of the population, and by the physical qualities of the place that create opportunities for criminals to act and escape.

The next are recommendations specific to the two neighborhoods studied (Rock Lake and Lawsons-Fern Creek) that could improve the qualities of safety and community participation.

- ROCK LAKE (see fig. 3.34)



Fig. 3.34: Rock Lake: design recommendations.

1. Definitely the most important recommendation is to open the lake area to the community of the neighborhood. Well planned recreational areas, furnished with different amenities that promote the use of the open space: picnic areas, benches, walking paths, community halls, and playgrounds. Houses bordering the lake should be open to the natural area, improving qualities of surveillance and control.

2. Minimize the impact of the high traffic streets bordering the neighborhood into the internal residential areas. A physical layout that defines in a perceptible way the private character of the residential areas and promotes territorial definition of these spaces would increase safety in those areas. Transitional areas (semi-public) between commercial and residential zones would discourage outsiders of crossing into more private areas.

3. Arlington Street must be readapted to allow pedestrian use of the street. Transitional spaces between private residences and public area such as porches or other meeting places would promote use of the street by residents. Other sitting areas along the street would be helpful to promote use of the public space and, consequently, control over the area.

4. It is important to open to the neighborhood the community learning center at the corner of Orange Blossom Trail and Colonial Drive. The empty lot in the back of the

2. Trinity Methodist Church complex must be open to the neighborhood and allow public use of the open areas, playgrounds, and sport facilities existing there. The location of the church offer great potential for the place to become a community meeting place, and a transition area between high traffic streets bordering the neighborhood and the residential core.

3. Reeve's Terrace must improve its territorial character and definition of the private residential space. The connection to South Street must be controlled by including transitional semi-private spaces, and physical features that communicates the private character of the housing project. Include facilities that promote neighbors interaction such as learning centers, elementary schools, or exhibition halls for artistic presentations.

CHAPTER 4. DESIGN RECOMMENDATIONS

4.1 CPTED (Crime Prevention Through Environmental Design) THEORIES

Crime Prevention Through Environmental Design (CPTED) is based on the use of four basic strategies: natural surveillance, territorial reinforcement, natural access control, and target hardening (see appendix A: Summary of CPTED Theories). One of the pioneers of this approach to crime prevention was Oscar Newman, whose theories have been summarized in previous chapters. Most of these theories were originated in the beginning of the 1970's. Since then, many other researchers and planners have followed and developed even further Newman's theories.

In 1987, then Florida Legislature approved the Safe Neighborhoods Act, which allow organized communities to acquire funds in order to make physical adjustments to their neighborhood, following the principles of CPTED. This was the first program of this kind to be approved in the United States and is, for this reason, a model for other states (Zahm, 1989). The program is coordinated by the Department of Community Affairs (DCA) and technically supported by the Department of Legal Affairs in the office of Crime Prevention and Training. One of the excerpts of this act says:

The legislature further finds and declares that safe neighborhoods are the product of planning and implementation of appropriate environmental design concepts, comprehensive crime prevention programs, land use recommendations, and beautification techniques. (Florida Legislature, Safe Neighborhoods Act: 1987).

CPTED theories have been applied in other U.S. cities, and this action has been criticized as a non-effective measure to control crime. One example is the plan to reduce crime in low-income neighborhoods proposed by Mayor Richard M. Daley in San Francisco, in 1993. This plan created a big debate among planners. The plan consisted basically in closing thru traffic in some streets by using Cul-de-Sacs and other type of barriers. Daley defended the plan saying that it would reduce drive-by shootings, drug traffic and other crimes. Critics said that the plan would only isolate communities and trap residents along with criminals. One of those critics was Jane Jacobs, who affirmed that the plan was a terrible idea because those barriers require additional surveillance, as by private guards, affordable only in higher-income neighborhoods; but in low-income neighborhoods this plan would only create "cages where criminals can get at people" (Chartier, 1993). This demonstrates the fact that theories such as CPTED can easily have supporters as well as detractors. The idea of barriers to cut through traffic could be understood as following at least two of the main concepts of CPTED: access control and territoriality; but without adequate surveillance of the place, it can become an enhancer rather than a solution for crime.

For CPTED programs to be successful, they need the active involvement of residents, who also need to understand the basic concepts of the program and their functioning. CPTED would only be effective if its main strategies, access control, territoriality, and surveillance, are working together, as pieces of a mechanism; if one fails, the whole mechanism does not work.

4.2 DEFINING TERRITORIES

One of the most important strategies to prevent crime through design is enhancing sense of territoriality into neighborhoods. Oscar Newman (1973b) gives us these important recommendations for this purpose:

- The subdivision of housing developments to define the zones of influence of particular buildings.
- Creating boundaries which define a hierarchy of increasingly private zones in the transition from public street to private apartment.
- The subdivision of building interiors to define the zones of influence of clusters of apartments units.
- The incorporation of amenities and facilities within the defined zones of influence which answer to occupant needs.
- The significance of “number” in the subdivision of buildings and projects.



Fig. 4.1: Large housing projects should be subdivided into smaller groups in which territoriality can be developed more effectively.
Project: Skaade, Denmark,
Source: Gehl, 1987.

Two points are really important here: definition of the territory through physical elements, and encouraging its use by including amenities that respond to real needs of the residents. Constant use of these spaces not only reinforces their territorial character but also promote feelings of affiliation among people and with their environment.

Including signs or symbols to define territory, such as gateways, street furniture, or plant materials, is important to communicate to outsiders that they are approaching an area that belongs to a concerned community, that they are being watched, and that they should be careful not to break the established norms of behavior.

Avoid creating territories completely closed and separated from its surroundings, such as gated communities, which would only make the problem of crime even worse in the areas around them. Gated or enclosed communities also neglect casual or routinely surveillance by police and other security corps.



Fig. 4.2: Symbolic or real gates can be used to demarcate entrances to neighborhoods, enhancing the sense of territoriality.

Source: Madanipour, 1996.

Paths leading to buildings should be perceived as semi-private spaces, and residents should feel they are responsible for those places: “Residents are more likely to protect semiprivate space that they feel ‘belongs’ to them” (Gehl, 1987: 265). To create this sense of responsibility in residents, physical elements may be used to define open grounds such as symbolic or real barriers, gates and hedges, which also eliminate opportunities for passersby to cut through the site and gives a particular semi-private character to the place. Frequent use and presence of people are natural deterrents of crime (Newman, 1975). Designers can promote use of open spaces by using simple elements such as mailboxes, laundry rooms, communal buildings, and recreation areas located in direct relation to entry paths.

When incorporating recreational areas to neighborhoods, it is important that a group of people take responsibility for the area. When recreational areas and open spaces are undefined or unattached from the urban structure of the neighborhood, these places become no man’s territories, attracting vagrants, delinquents, and other undesirable persons. They can also propitiate fights between rival groups trying to dominate the area. This is precisely why many people are concerned about having their houses besides a park or another open area. The fact is that the park by itself does not attract crime, but mistakes done in the planning of parks create an atmosphere vulnerable to crime.

Gardiner mentions three basic conditions for a community to develop a sense of territoriality:

1. The resident feels a proprietary interest and responsibility over areas beyond his front door, a responsibility shared by his neighbors.

2. The resident perceives when this territory is potentially threatened by the intrusion of strangers and is willing to act on that perception.
3. A potential offender perceives that he is intruding on the domain of others, will be noticed if he intrudes and, therefore, is more likely to be deterred from criminal behavior (Gardiner, 1978).

Two elements are specially important in the conditions cited above: one is the feeling of security and mutual support that neighbors are able to develop throughout time; the other is the intruders perception of being in someone's territory, which prevent him of breaking the established laws of behavior.



Fig. 4.3: The plaza of the New York Telephone Company was constantly used by “undesirables”. After some tables and chairs were put on the place, employees and passers by begun a process of appropriation of the area, displacing vagrants.

Source: Whyte, 1980.

The basic idea behind forming territoriality in the neighborhood is to make residents conscious of their responsibility toward the place they live in. Gardiner cites two main objectives of environmental design, in relation to territoriality:

1. To reorganize and structure the larger environments (city districts and communities) to reduce competition, conflict, and opportunities for crime and fear of crime, which undermine the fabric of a neighborhood.
2. To design the neighborhood environment to allow residents to use, control, and develop a sense of responsibility for it, resulting in territoriality (Gardiner, 1978).

In this order of ideas, territoriality not only functions as an intimidator to the potential offender entering the established territory; it also works organizing different communities sharing the same geographical location. The conformation of territories avoids conflicts between neighbors that could be generated by blurred or undefined limits between different residential zones.

Designers must avoid ambiguity in the physical and social structure of open spaces to be incorporated into neighborhoods. A space is ambiguous when its intended function or users (the people to be responsible for it), and its borders are diffuse. “Ambiguity may have serious consequences in crime-prone neighborhoods” (Gehl, 1987: 274). To define the character in any open urban area, natural and/or artificial elements must be used to conform the space and to relate that space to a specific group of persons that will feel responsible for the care of it.

It is also important to create a buffer between public and private space, as a transitional area. It has been shown that houses in direct contact to public spaces are more susceptible to be damaged or burglarized (Gehl, 1987: 276). This buffer or transitional area is also an indicator of a change in the character of the space, to alert visitors that they are approaching private area, an area that is of restricted use.

To define spatially private areas, use of natural elements should prevail over fences or walls, which either carry an intrinsic meaning of fear, or can be perceived as offensive for some visitors to the place. If fences or walls must be used to define territories, these should be aesthetical pleasant, in order to be perceived more as ornamental elements than defensive structures.

Designers must always remember that, even if they physically define territories, using natural or artificial elements, it is mainly by residents’ constant use of the space (and the sense of identity developed through it) that a territory is perceived, appropriated, and in this sense, created. Territories are shaped not only by physical elements, they are culturally and socially constructed, and these characteristics are the most important in order to form communities and enhance public life.

4.3 ENHANCING COMMUNITY

Skinner in his book: “Beyond Freedom and Dignity” (Skinner, 1971) implies that it should be the professional in design, the planner, who takes the initiative and makes the decisions about how a new urban development should be. What Skinner wanted to show

with this affirmation is that community participation in the neighborhoods' design process is not important. The basic concept supporting his idea was that it is the designer who has the professional knowledge to provide future residents with the proper environment where they can develop a good and healthy social life.

Becker, on the other hand, presents a study made with the participation of students at Cornell University. In this study, students were permitted to express their own ideas in the decoration of their dormitories. The study demonstrated that overall residents satisfaction was greater when they could choose and decide about the physical arrangement of their dormitories:

User participation appears to increase user satisfaction for at least three reasons: it enables the user to develop an environment that is more closely suited to his or her needs or values; it increases the user's feelings of control over the environment; and it reduces the feeling of anonymity and communicates to the user a greater degree of concern on the part of management or administration (Becker, 1977).

Community participation in the design process should be encouraged in any new residential development; or incorporated later on as part of a plan of renovation or enhancing of the built setting. As Becker explains, this not only increases users' satisfaction with their environment, but also promotes a sense of responsibility for their place, and for each other. Solidarity among neighbors is essential to respond effectively against crime and other negative aspects in their territory. And territorial rights can only be exercised when each of the dwellers feels support by the other members of the community.



Fig. 4.4a and b: Community participation in the design process increases feelings of responsibility and attachment for the place.

Source: City of Orlando

The City Beautiful Movement, born in the 1893 Columbian Exposition in Chicago, based the rise of civic pride among communities on programs of beautification in neighborhoods. Although the program proved to be useful in promoting civic participation and social consciousness for the place, it diverted the attention from the real social problems, which needed more than esthetical remedies (Goldfield, 1987: 230). This experience should be taken as a lesson not to forget about the real nature of social problems in neighborhoods. Of course, programs of beautification are good tools to promote community interaction, but it is also a priority to pay close attention to social needs and particularly, to people's personal development.

A good way to promote neighbors' involvement and enhance positive social conditions in a community is through special learning programs, combined with hands-on activities in benefit of their neighborhood. Programs in horticulture, arts, construction, and so on, will not only be useful for improvement of the built environment, but also to favor personal and social progress.



Fig. 4.5: Community gardens are excellent for promoting among residents social interaction and involvement with neighborhood enhancement.

Source: Taylor, 1981.

A community center, easily accessible from any place in the neighborhood, and furnished to work as a multi-functional space, could be used as a learning center for the residents. It should be connected to open spaces for leisure, playgrounds, gardens, civic centers, and any other space or facility offering diverse services and uses, something interesting to do for each age or social groups in the population; in this way, the

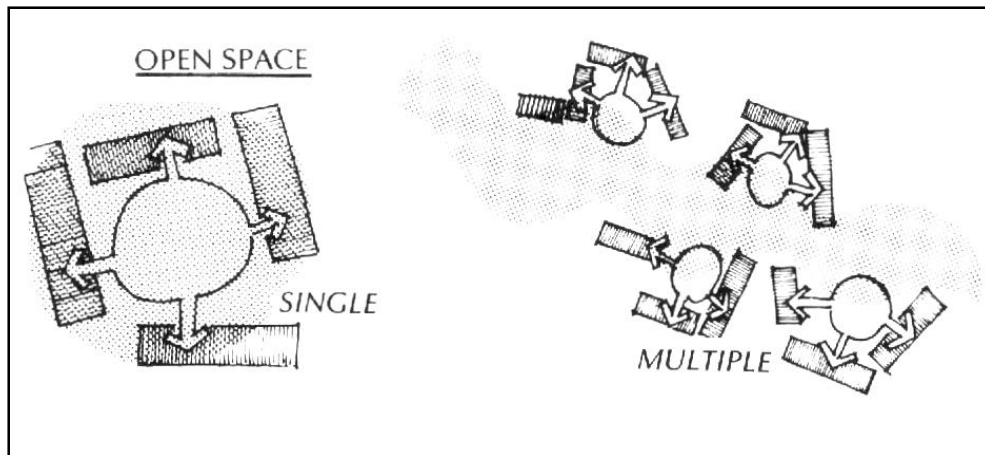


Fig. 4.6a: Large housing developments can discourage social networks. To avoid this, subdivide it into smaller groups where residents can easily identify each other.
Source: Untermann & Small, 1977.

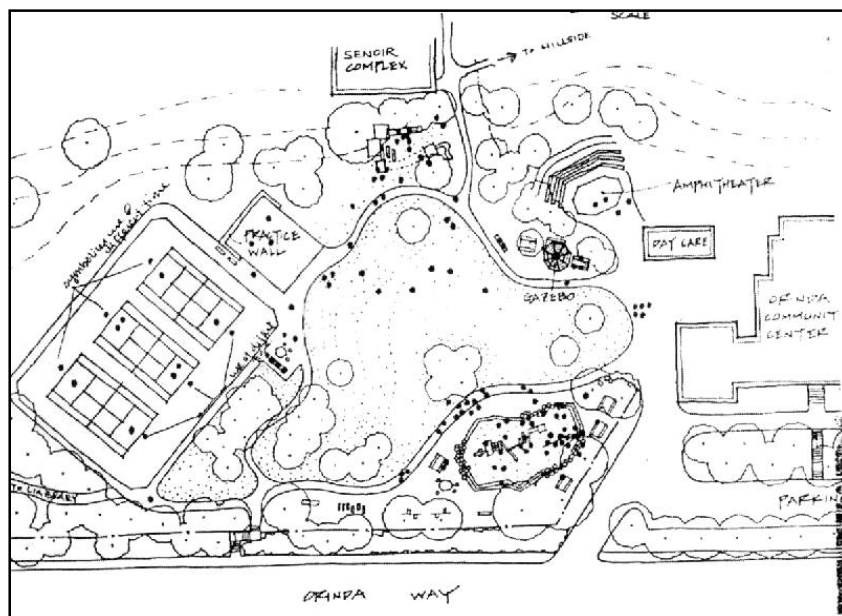


Fig. 4.6b: Main community center for the neighborhood should offer a variety of spaces that satisfy particular demands of different age and cultural groups.
Source: Marcus & Francis, 1988.

community center would work as an integrative element for families and neighborhood in general.

Elementary schools and playgrounds are excellent facilitators for social relations. Children interact easier than adults, becoming an ideal propitiator of adults' dialogue. From this fact comes the importance of including spaces adjacent to playgrounds that are attractive to adults, comfortable, and furnished in a way that facilitates dialogue. Visual relation to playground permits adult supervision of children at playground, and is a factor that favors social relations.

The paths connecting schools and residences must receive special attention during the design process. Qualities of comfort, aesthetical values, functionality, and safety are basic elements in order to discourage use of automobiles to drop-off and pick-up kids from school, allowing more social interaction and civic life in the neighborhood.

Behavior characteristics of students in middle and high schools are completely different than elementary school students'. Teenagers in big groups, when getting out from school, can be antagonistic with other members of the community. Middle and high-schools must be separated from semi-private and private areas of the neighborhood by buffer zones such as public, vegetated spaces with sports courts and other activity zones, where teenagers can hang-out and burn some of their natural energy, and at the same time practice their social role.

To create community, it is essential to provide places for residents to get together, to share their concerns, and to look for their solutions. These communal centers must be located in a place easily accessible, at a walking distance from any point of the neighborhood. If the size of the neighborhood makes this unpractical, more centers should be planned, subdividing the whole territory into sub-areas where residents can be identified and can become familiar with their setting. But to foster stronger, better-represented communities, these sub-centers must be tied to a main civic center, which may also be identified as a symbol of unity by all of the residents of the major area. This main complex should offer enough parking spaces and other facilities to attend representatives of the whole community during special meetings.

To allow community to grow, spaces must facilitate dialogue and casual encounters. Among the elements to be avoided could be mentioned: poor lighting, noise, detached or completely fenced residential units, places without climatic protection, dereliction or disorder. On the contrary, elements that encourage interaction could be: houses around or close to a public space to offer constant surveillance and control, easy access, elements controlling climatic conditions, vegetation, visual contact among neighbors, functional spaces that attract users and promote encounters. We should not forget that streets and sidewalks are public spaces also; many types of social intercourse happen on streets. Streets crossing neighborhoods should be seen more than mere functional paths for cars and people; they should be seen as longitudinal plazas where community is developed.

Urban layouts can be "Sociopetal" or "Sociofugal", bring people together or pull people apart; designers, therefore, have a big responsibility in how people interact and friendships develop in a neighborhood.

In understanding the effect of closeness on social contact, it is necessary to recognize that it is functional rather than physical distance that makes the



Fig. 4.7a: Spatial layout and furniture on public spaces can be obtrusive to social interaction (sociofugal).
Source: Whyte, 1980.



Fig. 4.7b: Furniture on public spaces should be arranged to propitiate social interaction (sociopetal). Mobile furniture is an excellent choice for this purpose.
Source: Walker & Simo, 1998.

difference. People may live just inches apart, separated only by a wall, but if they use different stairs, travel different paths, or follow different schedules, they may never even see each other (Deasy, 1989: 19).

Communication is essential for humans and the primordial means to promote community consolidation. Designers play an essential role in how people interact, since most of human relations start in public places. Casual encounters or social activities taking place in public spaces are the first step in the formation of a relationship. Deasy mentions some very valuable guidelines in order to facilitate communication between people in public places:

- In heavy traffic areas, provide a place where people may stand out of the line of traffic.
- Provide seating wherever it appears that chance meetings and conversations may occur with some regularity.
- Seating should be flexible so that people can adjust to suit their own preferences.
- If seating is not flexible, it should be arranged so that people can sit at approximately a 90-degree angle relative to each other.
- Lighting should be arranged to illuminate the faces of people who are conversing so that facial expressions can be clearly read. This is a consideration that is often overlooked. Much lighting design is focused in object such as tables, desks, and displays, rather than people.
- The color of the light should be appropriate, such that people's flesh tones are rendered correctly.
- Minimize or exclude outside noises that might interfere with conversation.
- Provide an acoustical setting that is free of reverberation and distortion so that speech can be heard and understood clearly. (Deasy, 1985: 30).

Public spaces cannot be considered as magical producers of community. These spaces do not work by themselves. They must fulfill certain conditions to encourage residents' use: central location, easy accessibility, climatic comfort, and facilities to provide varied services.

4.4 PROMOTING USE OF OPEN URBAN SPACES

One of the main concerns for safety in a neighborhood is the existence of public areas that are barely used, becoming places suited for criminal behaviors. Those public spaces are detached of the functional and social structure of the neighborhood, becoming "no one's territories," and promoting a process of deterioration of the surrounding areas.

Oscar Newman has many times expressed the importance of including activities in public and semi-public open spaces that encourage use by residents. Constant use of public areas by nearby residents, according to Newman, "brings these areas under casual surveillance by concerned members of the family and further reinforces its defensible space attributes" (Newman, 1973). He also mentions that: "normal vehicular, pedestrian,

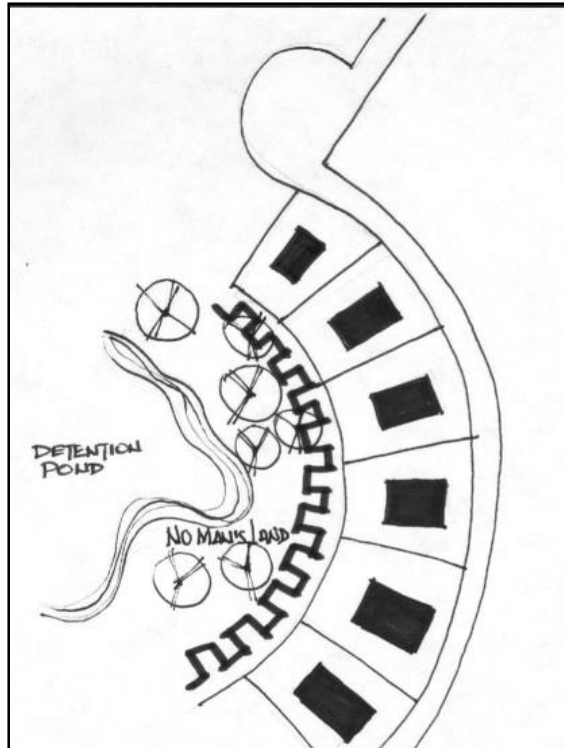


Fig. 4.8a: Open areas without connection to surrounding houses become “no man’s” land, easy targets for criminals.

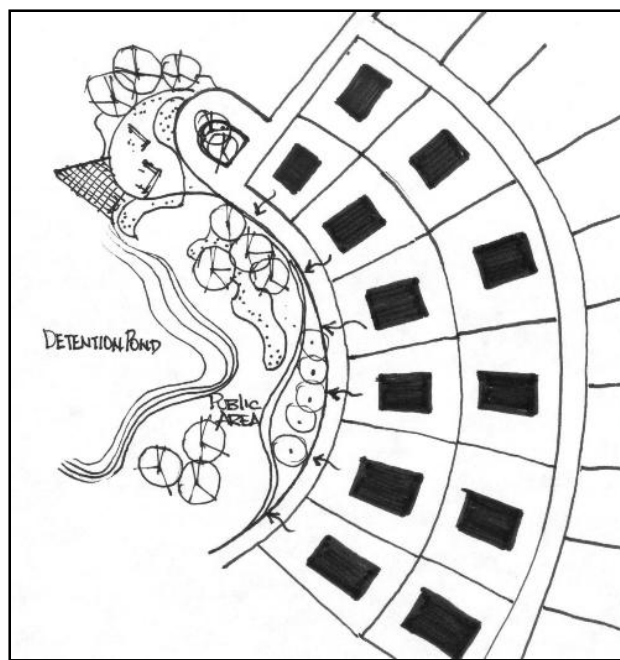


Fig. 4.8b: Open areas easily accessible by near-by residents promote social interaction among neighbors and discourage crime on the place.

and commercial activity along city streets may act as a social deterrent to crime” (Newman, 1973b). This could be applicable not only to streets but to any other public area.

Natural surveillance is defined by Newman as “the capacity of physical design to provide surveillance opportunities for residents and their agents” (Newman, 1973). When people feel supported by their neighbors, fear and anxiety feelings will decrease, and community will begin to feel they have rights over their territory, which will positively affect the response of people to confront any criminal act.

Parks and open areas should never be located at the borders of the residential developments. Spaces of this type do not have territorial character, becoming easy targets of criminals. Dense vegetation, size, and topographical qualities of the place may act also as barriers blocking connection between public space and residences around.

Size is an important factor to be considered in the design of a public space according to this, it is worth to mention an analysis presented by Jan Gehl (1987): Palmanova, the ideal renaissance city designed by Scamozzi, at north of Venice, presented a layout composed by identical streets (46 feet wide), regardless of function or significance; its main plaza measuring 325,000 square feet, more than twice as large as Piazza del Campo in Siena. But while Siena is highly recognized by its active and successful urban life, Palmanova does not present the same vitality. Piazza Grande at Palmanova is an example of an urban space that discourages use by presenting an inappropriate scale to the actual needs of the surrounding community.

Designing areas to be effectively used requires considering the particular needs of the social group the space is intended for. Oscar Newman (1975) reminds us that different ages, races, and cultures demand different qualities in open areas. For instance, taking in consideration age: small children require playgrounds close to home, where they can be watched by their parents, but still have some freedom and space to exercise and socialize. Teenagers are completely different; they require areas where they can feel independent, and that permit their self-expression and discovery of their own personality.

Nevertheless, both groups (children and teenagers) need some kind of supervision by responsible adults in the community and authorities. While in children areas supervision can be evident, teenagers need to feel that their place keeps a character of independence; in this case, supervision must be presented in a casual way, for example locating those spaces to be visible from main circulation routes, or by planning close to them, facilities that offer services demanded by the teenagers community, such as soda shops, or video stores.

Elderly areas require special attention also; these must be quiet and comfortable places, easily accessible, apart from noisy or highly active areas, such as teenagers’ hangout zones. Elderly and children places could be connected, which would be beneficial to both groups: children being watched by older people, and old people feeling rejuvenated by the tender and innocent attitudes of children at play.

Since childhood is the stage of life when our sense of socialization is nurtured, playgrounds, which are basically the setting for those first experiences, should be designed according to children’s natural behavior, to promote in this way a positive social functioning later in life.

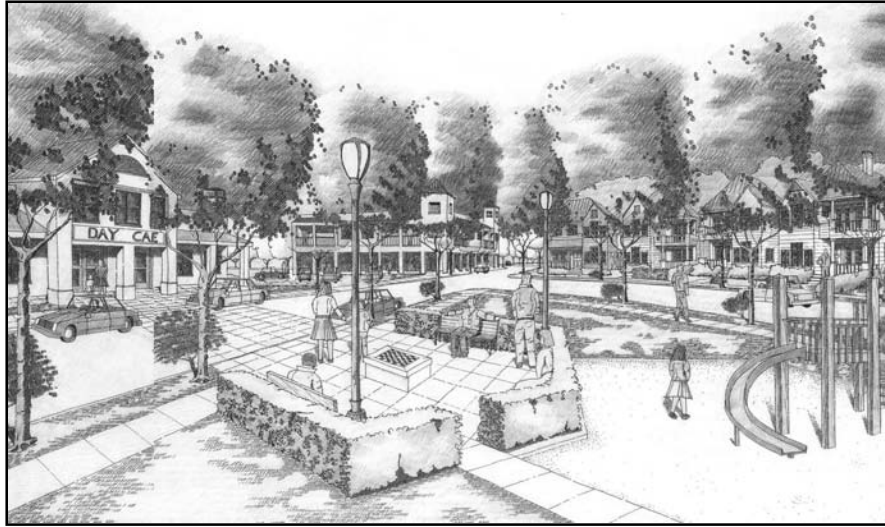


Fig. 4.9: Playgrounds must be located permitting surveillance from surrounding houses. Spaces for adults' use must be included to promote social interaction.

Source: Katz, 1994.

Lukashok and Lynch remind us that “a child’s play is more satisfactory when it allows him the greatest opportunity to manipulate its environment according to his needs: to imagine, to create, and hide” (1956: 145). For this reason, a children’s playground should not be totally finished, totally designed. The playground should offer kids an opportunity to explore, to create, and re-shape the environment. Incorporate pieces that children can move around and build a new world, provide blank spaces for self-expression, and set aside spaces without a specific function, where the function is given by users. Clare Cooper Marcus made a study to find out which are the places that people feel as the most cherished childhood memories. The result was that the most memorable childhood places were those that people molded or created, as from dirt, sand, leaves, grass or twigs (Marcus, 1992: 91).

Some special features can be used as invitational tools to public spaces. First, passersby should be able to perceive what is going on inside the public area; second, the access to those spaces must be easy and direct (not necessarily straight); and third, consider the incorporation of transitional zones between private and public areas; this promotes use of the public places by residents, as response to a feeling of progressive safety when passing from private to public milieus, and also avoids violation of private properties by users of public space. Gehl affirms that: “whether the public environment invites or repels is, among other things, a question of how the public environment is placed in relation to the private, and how the border zone between the two areas is designed” (Gehl, 1987).

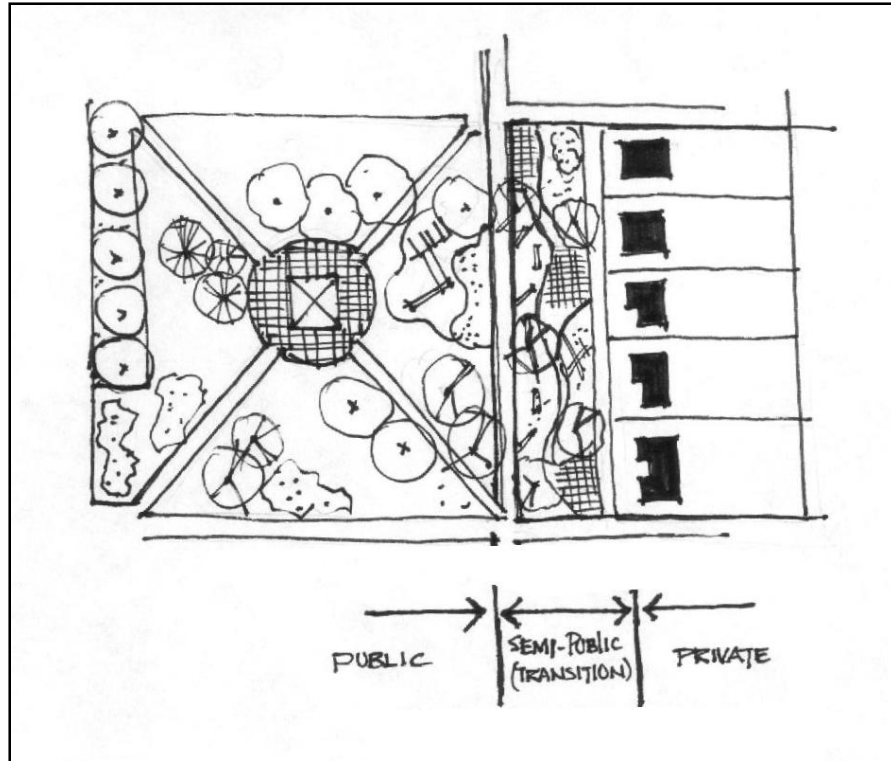


Fig. 4.10: Transitional areas between public and private areas have two main purposes: serve as a buffer that keeps private character of houses, and propitiate appropriation of public spaces by residents.

Sitting arrangement is important in order to create public spaces that promote encounters and develop social interaction. People go to public spaces to interact in an active or a passive way with other people. Sitting furnishing can be designed in such a way that drives people apart, or get them together. Just as simple as facing other people can be a reason to start a social interaction. As Erving Goffman mentions: “acquainted persons in a social situation require a reason not to enter into a face engagement with each other, while unacquainted persons require a reason to do so” (1963).

Climatic comfort is an obvious requirement for a public space to be highly used, and consequently, act as crime deterrent by holding regular presence of people. Fresh breeze and shade on hot days, wind screening and sunny areas in cold days are two recognized qualities that attract people to open spaces. Other less obvious consideration is addressing noise and smells. The control of these qualities is sometimes forgotten by designers but is equally important. Noise not only prevents normal conversations but also can contribute to crime, as preventing others around from hearing a person asking for help in case of a criminal attack. Smells can affect behavior in a positive way, creating a good mood in people, or drawing their attention towards the public space. Obviously offensive smells would stimulate opposite behaviors.

When formal playgrounds and other open social spaces are not incorporated in the design of a neighborhood, streets usually take that function. This dual function of streets,

as functional traffic ways and as social places, should be carefully worked out by the designer in order to avoid conflicts, conflicts such as between vehicles and pedestrians and conflicts between residents who enjoy social activity and those who want to live apart of it, in a more private environment.

Street activity, according to Jane Jacobs, can work as an excellent crime deterrent. An example of adapting streets to be used as social places is mentioned by Gehl (1987) and it has been implemented in the Netherlands since the early 1970's. "*Woonerfs*" or mixed courts are basically internal streets in the neighborhoods that do not have curbs, creating a combined circulation of pedestrians and vehicles in the same surface. The pedestrian character of the street is reinforced by using special paving materials, such as bricks or stones, incorporating planting beds, trees, and street furniture. These elements reduce the hazards both for drivers and pedestrians, and provide buffers between houses and street (see fig. 4.11).



Fig. 4.11: *Woonerf*, special type of shared pedestrian-vehicular roadway in Denmark.

Source: Design Council, 1979.

When a street or any other public space is richly furnished, and offers varied possibilities of use, it becomes attractive for people. Jane Jacobs mentions four basic elements that parks or other public spaces should have in order to be intensely used: intricacy, centering, sun, and enclosure (Jacobs, 1961). Intricacy is basically what makes parks look more complex than what they appear to be in plans; this allows people to get different experiences and sensations as they wander through the space. The second condition, centering, is the incorporation of a main area, as a main stage, that could act as a directing element or as a general organizer of the space. The third one, sun, is really sun or shade, whichever condition is necessary in order to give climatic comfort to visitors; it could also be considered other climatic factors such as wind and rain. The fourth element, enclosure, refers to the physical definition of the space, either by buildings or by other means (vegetation, fences, symbolic elements, etc.); this condition is important to create a perception of territoriality, avoiding “leftover” spaces or no-man’s lands, grounds without character.

Sometimes, when educational or other civic institutions share a public space with a residential community, conflicts about use or rights over the space are often likely to appear. One good way to prevent this type of conflict and at the same time makes something positive out of this condition, is to involve community and institutions in the design and care of the park or public space. The groups should find ways to enhance its use through activities in which both the community and the institutions play an active role. This working together will also establish a better relationship between the institution and the community. Lets say, for example, a school and a residential neighborhood share the same park; the school could perform artistic presentations, or organize sports competitions with the help and participation of the community members. This will promote use of the public space, avoid conflicts about rights over the space, and discourage presence of undesirable people in the park.

One of the main benefits of continued use of urban spaces is the sense of attachment emerged from it. Deborah Pellow, who studied African communities and their attachment to their setting, mentions that attachment comes from the actions and the possibilities the space offer to be used (Pellow, 1992: 197). She also explains the significance of this process by describing the importance that have for these communities the “compound yards”. Compound yards are open spaces around which residences are organized. The compound yard works as public space for community meetings, but also functions as a transitional space between public and private domains, permitting appropriate use of each.

This is an example worthy of application in today’s neighborhoods. Public, semi-public, and private areas can share the same physical setting if there is a clear definition of each, and a clear functional and symbolic inter-relation between them. Clear definition of these three domains increases possibilities for inhabitants to use the space, and to be involved with each other and develop social ties that would benefit the whole community. These meeting places, acting in the same way as the African compound yards, would be “a context within which activities go on, where over time cues are built into the environment...an instrument of socialization” (Pellow, 1992: 204).

4.5 HOMOGENEITY AND DIVERSITY

Both Gardiner and Newman, important theorists on crime prevention, mention that communities that share common interests are more likely to develop an effective cohesiveness, which is a useful quality in preventing crime. Jane Jacobs is one of the most prominent theorists who claims that diversity (cultural, social, physical, and visual) in an area is a valuable resource to draw attention to the street, to make public spaces more livable and to guarantee “eyes on the street”, which would provide the perception of safety to neighbors and other users of the place.

Common interests should not be equalized to common social or cultural background. The past and the traditions are important, but present and future are the reality, what we have to really care about. Common interests are a product of a shared objective. The main issue in designing spaces to promote community is to develop a sense of social involvement that characterizes homogeneous communities, even if the people participating are all from different cultural, social, or ethnic backgrounds.

America particularly is characterized for its social and ethnic diversity. Groups of different cultural or ethnic upbringing should now share the same setting. It is the main reason why we should look for more creative, or deeper interpretations of the requirement to create a homogeneous community.

Hall (1966: 122) says that usually in America, where cultural diversity is a reality in most of the biggest cities, programs of urban renewal do not consider cultural differences of residents. We do not need to create an exclusive place for each cultural sub-group in a community; the main purpose of community design must be to work towards achieving integration and harmony among different individuals or groups living in a given place. What is really needed is that spaces that are used by residents to fulfill their basic social requirements and cultural characteristics. In this sense, public spaces must not be related to any specific group in particular. They should be easily adaptable to work well according to cultural and social expectations of every cultural group living in a community.

Blacks, Whites, Hispanics, Indians, Europeans, approach social inter-relations in a different way. If the public places are flexible enough, people will re-adapt their environment to their particular needs. This does not necessarily mean allowing physical changes to the place, but promoting users appropriation of particular areas in the place that fulfill their cultural expectations. It is through this process of appropriation that people get attached to their place, becoming responsible for keeping qualities of the environment that would guarantee a healthy social and cultural development. Any type of scheme that permits self-expression to residents will be more appreciated than any other design scheme with a more anonymous character.

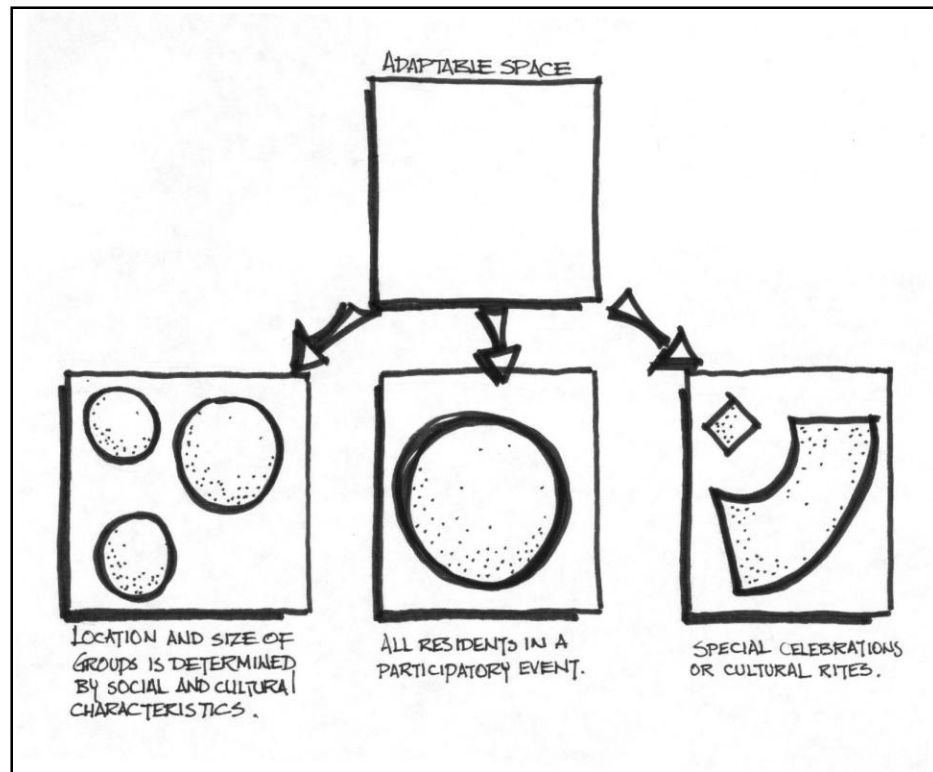


Fig. 4.12: Public spaces in neighborhoods must respond to the multi-cultural composition of today's society and different social requirements of residents.

4.6 PLANT MATERIALS

Benefits of vegetation in environments where community is a main concern have been explained throughout this thesis. Nevertheless, vegetation can represent a problematic condition for residents' safety if it is chosen without considering design and placement factors that could promote criminal activity.

Dense vegetation can be good as a climatic conditioner but, regarding safety, it can be sometimes another factor contributing to crime. For instance, it is important for residents to have the ability to pre-scan the path between public realm and private place (Newman, 1973b); for this reason designers must avoid locating dense shrubs in walkways' turning points, massive use of canopy trees that block natural and artificial light, and any other plant material along usual circulation ways that could be used as hiding places by perpetrators.

One of the main concerns of Americans is to achieve a sense of privacy and independence for their own residences. The most common way to achieve this is through the use of fences and/or dense natural hedges. The irony of this, according to Newman, is that "the higher the fence, the greater the need for the fence" (Newman, 1975); in other words, what fences are doing is creating spaces totally isolated, without any visual



Fig. 4.13: Dense, overgrowth vegetation at the border of open spaces inside the neighborhood creates a threatening situation for houses located at front and passers-by.

contact with the surroundings, making casual surveillance by neighbors impossible and consequently, increasing the probabilities for criminal acts.

When it is necessary to define private property, natural elements should be preferred over high walls and fences. Vegetation, additionally to demarcate territories, offers an aesthetically pleasant view and creates a better environment for inter-personal relations. Walls not only define private property, they also have implicit a meaning of fear and isolation. Vegetation, even though delimitates private zones, have a different connotation than walls; natural barriers blend more easily in the surrounding environment, and in this sense, is more adequate to allow better relations between residents.

Tall hedges and dense shrubbery must not be located close to houses entrances or windows. Tall, dense shrubbery can offer hiding places for potential attackers. Vegetation should not block the view to the door as approaching from outside. The condition of pre-screening the house's entrance is an important factor to prevent criminal attacks.

Do not locate trees close to buildings whose branches could offer a possibility to reach upper parts of it, such as terraces, balconies, or upper stories windows. Criminals could use these trees to get into the house. Trees that completely block the view of the main entrance must be also avoided, as they do not permit having control over people approaching the house.

The previous suggestions were mainly focused on the prevention of criminal acts directly. The next suggestions are to promote social involvement with the environment, as a way to encourage people to act against crime into their community.



Fig. 4.14: Natural fences are preferred over walls or chain-link fences. The natural elements blend with the surrounding landscape, creating a positive response by passers-by.

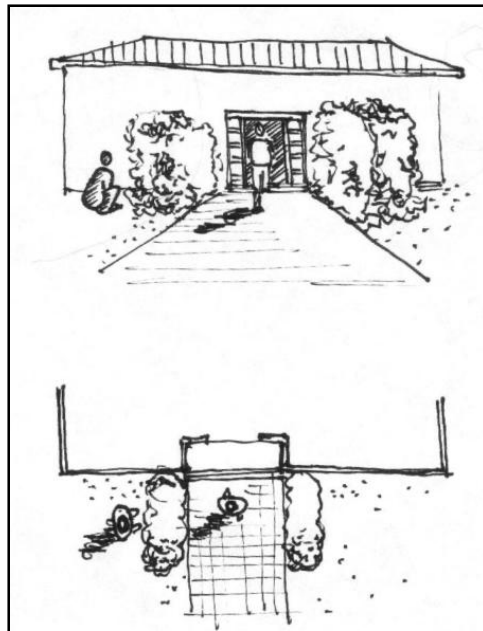


Fig. 4.15: Avoid placing dense, tall shrubbery close to the house entrance. This provides hiding places for potential criminals.

Vegetation can be used also to clearly differentiate territories into a neighborhood, when a neighborhood's size requires subdividing it into smaller communities to form effective social networks more easily than large neighborhoods units. Each of these territories could be characterized with the use of a predominant type of plants or trees; using plant materials to establish a unique aesthetic character would make neighbors and visitors perceive each residential sub-unit as a separate entity, promoting in feelings of appropriation and willingness to defend it.

Regarding sociological purposes of using vegetation, the way in which it affects human senses can be either beneficial or detrimental. Smells, for example, can be used to attract people to a place, to create a positive attitude on people, and to improve socialization. On the contrary, offensive smells could (or intentionally be used to) discourage people's presence in an area.

Colors can be playful, inspire happiness, or attract people to appreciate nature; on the other hand, monochromic landscapes and opaque colors can lower levels of energy and inspire feelings of sadness. Both types of landscapes, colorful and monochromatic, can be useful according to the intention of the designer and the particular needs of the place. Sometimes it is necessary to cheer people up, and sometimes to calm them down, so as to avoid violent attitudes or acts.

Attachment to place is only possible through experiences and time. Vegetation can make more evident the dynamics of time, and can emphasize the significance of certain experiences, such as those that mark the process of growing up. Trees and plants that change throughout seasons and over the years would act as an active scenario that would make stronger the memories of special moments on life. Those memories will be tied to the places where the events happened and will become part of the environment. Due to this new perception, the landscape becomes a social and symbolic entity that people will defend, because they appreciate it.

The process of socialization and attachment to a place takes time, and is more effective when it starts in the childhood. A good environment and positive social relations in the early years are the main foundation for a healthy physical and psychological life in adulthood. Playgrounds, under this concept, must receive special attention in their design and implementation.

Aesthetical qualities of vegetation are important to develop in kids a positive attitude towards environment. Other qualities of vegetation are also important for children's physical and social development. For example low, branched trees can be used for children to explore and experience nature at first hand, plants of different colors and smells will teach children about the diversity and harmony existing in our environment, plants and trees that attract wildlife will serve as a vivid example of the functioning of the universe. Nature teaches children that everything in the world is related, and that when a part of it is harmed, the rest of the environment will suffer the consequences. In conclusion, natural elements can teach children important norms of behavior and socialization.

4.7 HIGH-DENSITY AND LOW-DENSITY COMMUNITIES

To what extensity housing density contributes to crime is still uncertain. Some researchers, as Jane Jacobs, defend high-density neighborhoods because of their

potentiality for social activity. Some other theorists, as Oscar Newman, put limits to density in order to keep control and order. Current theory suggests that high-density developments require a different approach in their design than low-density communities, in order to permit a healthy living.

High density can be beneficial for social relations only if there is not a feeling of over-crowding among residents. In order to avoid this in large developments, the total residential setting could be sub-divided into smaller areas, at a size that would permit residents to identify with each other, and to form ties of friendship and solidarity. The size and physical layout of sub-units should make evident the presence of outsiders, and outsiders should be able to easily perceive the territorial character of the place. Physical elements such as symbolic gates and special markers can define the limits of the area. Homogeneity in street furniture or materials, vegetation, and other fixed or transitory elements could be used to reinforce the unique identity of a place.

Each of the sub-areas of the large development must work as a cohesive community. The incorporation of a civic center and a public space where neighbors can meet together is essential. This public space must be in the central area of the development, easily accessible from each unit, with possibility of surveillance from adjacent houses, and separated from private areas with a buffer zone.

Each sub-area must be physically differentiated, but not isolated, from the rest of the neighborhood. Small sub-communities cannot offer, in many cases, ideal solutions to social problems. As a whole, community would have a better chance of having their problems considered by governmental authorities. To unite groups of different sub-areas, the neighborhood layout should include a special place where all the neighbors can convey periodically to discuss their problems, and also to strengthen their social ties. Programming periodically community events would be a good reason for neighbors to meet together.

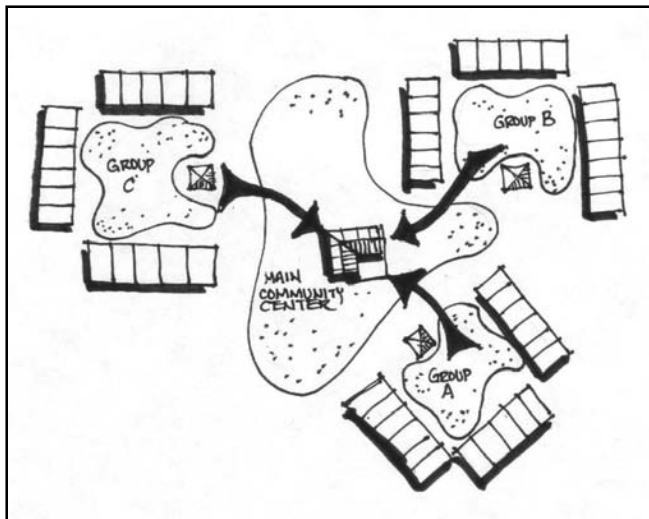


Fig. 4.16: For high-density developments not to become over-crowded developments, the whole number of houses should be organized in sub-groups around a common public space. To keep subgroups tied into the bigger community, there must be included a main neighborhood center, equidistant from every sub-division.

When the total grounds of a high-density project is subdivided into smaller territories, this not only avoids feelings of overcrowding, but also makes the spaces easier to defend, permitting the possibility to differentiate strangers from locals, to facilitate residents surveillance of public and semi-public places, and to promote sense of ownership.

Public spaces inside the neighborhood will never be situated in the borders, or detached of the surrounding residential units. The location of the main civic center should be in a central location and easily accessible from all the sub-units in the neighborhood. This aspect is important to avoid concerns among groups of being treated differently.

In high-density developments, utilitarian public spaces such as laundry rooms, mailrooms, parking lots, and playgrounds are the places where most of casual encounters among neighbors occur. Therefore, these places must be furnished, and climatically adapted to offer comfort and promote social interaction. Each of these spaces must be located in a central location, designed to be observed from other points in the neighborhoods, and until it is functionally possible, open to public activity. Avoid designing spaces for public use totally enclosed, or without visual relation with surrounding houses or streets.

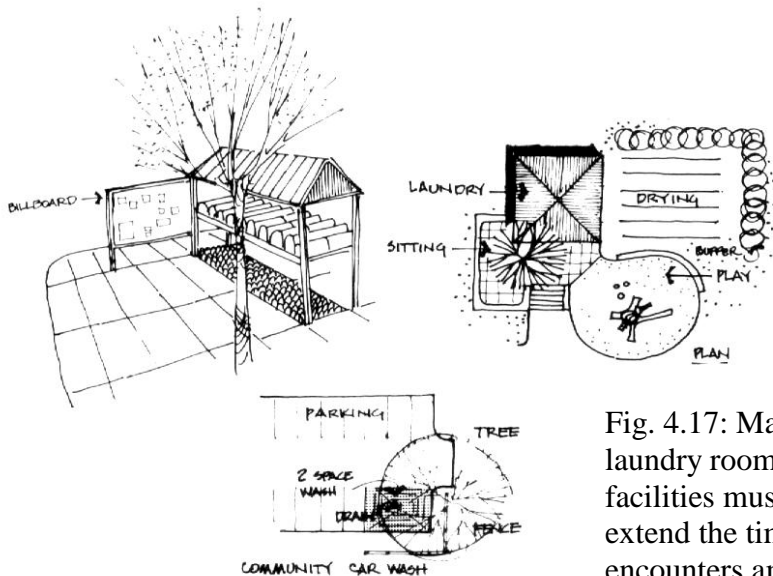


Fig. 4.17: Mailboxes in clusters, laundry rooms, and car-wash facilities must be furnished in order to extend the time of everyday casual encounters among neighbors.

Source: Untermann & Small, 1977

Low-density communities often lack the social activity needed to guarantee a proper interaction between neighbors. An example is the typical suburban subdivision, where houses are isolated on their own lot, where no public spaces have been included in the neighborhood layout, and parks are usually green areas around the obligatory retention ponds, located usually in isolated areas of the development, without easy access for residents.

Low-density neighborhoods need public spaces designed to be easily accessible by the community. This would improve qualities of social living, so needed in suburban

developments. Houses could be grouped around a public place offering attractive uses like sports courts, jogging paths, playgrounds, resting places, contemplation places, and any other activity that provides the opportunity to families and neighbors to meet and interact at some meaningful social level.

Clusters of mailboxes located in strategic areas, such as close to main circulation paths, main entrances to the neighborhood, and close to parks, should be preferred over individual mailboxes in front of each house. In this way, there would be more chances of casual meeting and perhaps dialogue among residents.

Avoid hedges, walls, or fences that completely isolate the house from the rest of the neighborhood. Architectonical spaces such as balconies and porches are excellent propitiators of public space appropriation and neighbors' interaction; they also are good places to exercise casual surveillance.

Huge backyards surrounded by fences usually offer little possibilities for a real and practical function. Fences are considered important, much more in American culture, to offer independence and privacy. But they are also excellent screens for criminals trying to break into a house. Opening yards to neighbors' view does not necessarily mean loosing privacy. Privacy can be obtained by using architectonical elements inside the house, or by incorporating natural screens in transitional spaces between house and yard.

High density or low density is not necessarily the main concern among residents, overcrowding is. Different cultures perceive overcrowding at different levels. The prime factor to be considered in designing residential complexes should not be the number of people living in a determined area of land; the main factor should be to create a place that offer well-designed conditions for people to experience and develop effective social ties. Those places should create a sense of territoriality so residents develop an attachment to their place. If these conditions are obtained, residents themselves would control more effectively criminal activity in their place.

4.8 MIXED USES AREAS

The proponents of New Urbanism mention mixed-uses areas as a method to revitalize urban centers, to get people involved with their environment, to create livable streets, and to re-create the functional and social structures of old-time towns. For this reason New Urbanism is sometimes criticized as plain fetishism of the past, without offering real solutions for today's problems.

When we create the conditions that get people using streets and public spaces more, we are creating safer environments. When big urban areas are designed exclusively for residential use, or commercial, or industrial, this means that those spaces would have periods of activity and periods of no-activity. Residential areas would look empty in usual work hours; commercial and industrial areas will become vacant at night. This creates environments prone to criminal activity during those specific no-activity hours.

Areas where uses are mixed would appear to be a good solution to the intermittent use of public spaces. But mixing uses can also create a new set of problems. Those problems might include conflicts between users because of a lack of territorial definition and unclear rights over use. It is the designer's responsibility to prevent those conflicts from occurring by creating a harmonious relation between different uses. Buffers or mitigation areas must be located between:

1. School and commercial areas.
2. Residential zones and sport facilities or playgrounds.
3. Spaces for the elderly and teenagers hangout areas.
4. Upper levels schools and elementary schools.
5. Business areas and school areas.
6. Industrial and residential areas.
7. Industrial and school areas.
8. Between any other uses whose characteristics can be a source for discrepancies.



Fig. 4.18: New Urbanism advocates for a type of planning that promotes social use of public spaces by mixing residential, commercial, business, and institutional uses in the same general area.

On the contrary, some uses can be regarded as complementary, or beneficial. Playgrounds need to be attached to other areas where habitual users can watch over kids. Therefore, spaces for the elderly, meeting places for the community, commercial areas, and residential areas can be planned functionally and visually connected with playgrounds.

Teenagers need their own space to feel independent. They also need to be controlled in some way, without reducing their sense of independence. Teen areas should be buffered both to prevent conflicts with other residents of different age groups, which

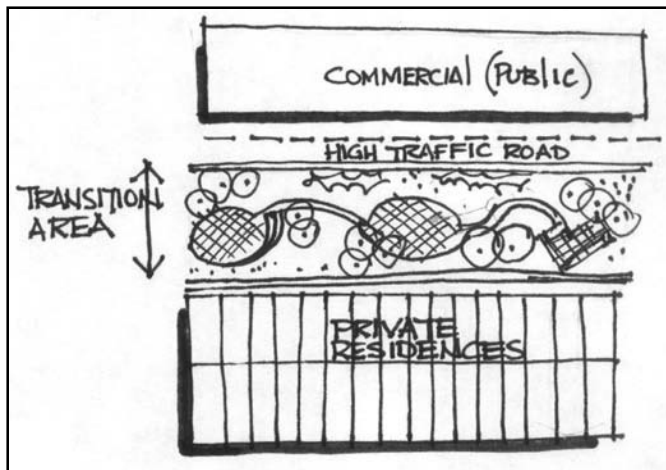


Fig. 4.19a: Buffers must be included between residential areas and commercial buildings and/or high traffic roads.

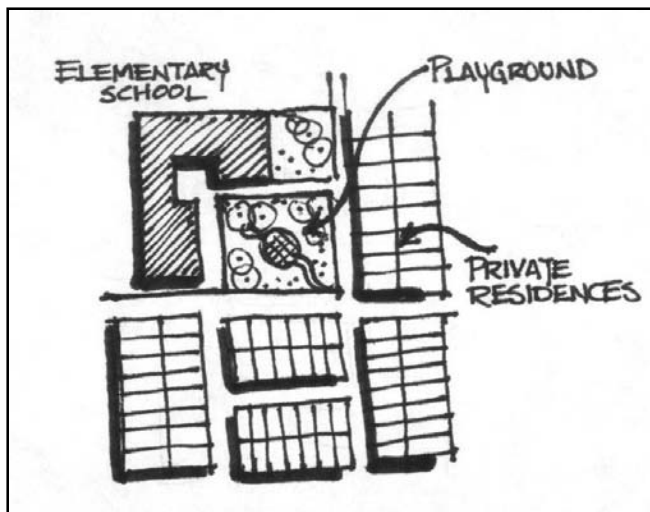


Fig. 4.19b: Elementary schools can be directly connected to residential areas. This promotes interaction between kids and accompanying adults, as well.

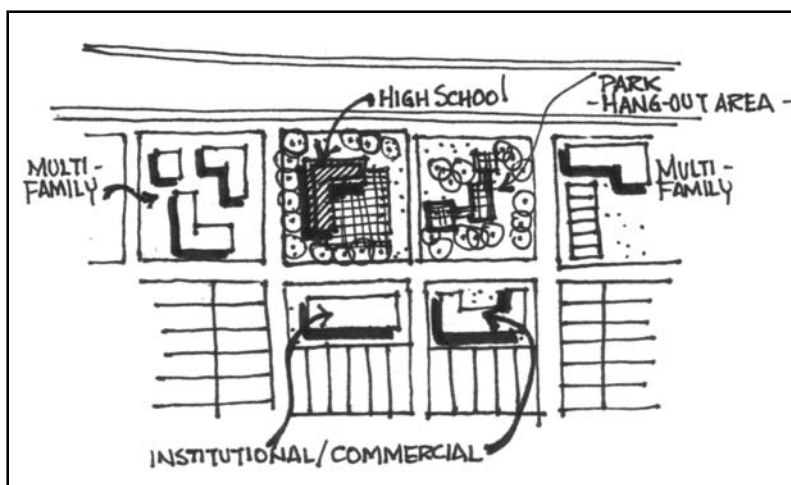


Fig. 4.19c: Buffer areas between high schools and private residences will prevent potential conflicts between neighbors and highly active kids.

could feel offended or intimidated by youths, and to permit them develop their own sense of responsibility. Control of these areas can be obtained by locating residences around, but separated by a transitional or buffering area, keeping a visual contact to the place; or from adjacent commercial establishments, which can be planned also as teenagers' meeting places.

One of the major challenges in urban design regarding crime prevention is to promote activity during night hours, providing at least some degree of casual surveillance by residents and other users. The problem is that the type of business that functions during nighttime usually is in conflict with the residential character of the area. A solution would be to plan residential areas and night business indirectly connected or functionally related, but still keeping the private character in residential areas independent of the public character of commercial zones. In this way surveillance is obtained from the people going to and coming from the establishments or houses, without necessarily sharing the same space. Other night activities that work harmoniously in residential areas are sports, cultural activities, walking paths, and night schools for adults.

The fact that different uses could be present in the same space does not mean that they should be entirely blended together. What is important is that each zone can be reached easily, and is at a walking distance from the residential zones, promoting use of streets and casual encounters that could develop into further social inter-relations. To be a more functional layout, residential zones should be planned in the periphery, leaving the center for commercial and business uses; in this way, all residents should have the same facility to get to stores, offices, and civic offices; and the area would keep its private and territorial character. Unfortunately this type of layout does not easily adapt to the way commercial activity is developed in modern cities. Business are usually located closer to main vehicular streets, this means at the neighborhood's periphery. In this case, access to commercial areas from the neighborhood inner places should be planned to be easy and pleasant, but keeping the territorial character and access control to the neighborhood from the public zones.

Parks and other communal spaces must functionally and visually connected to the residences to promote definition of territory and effective appropriation of the public zone. Streets connecting different use areas must be designed and furnished to offer comfort; they must be aesthetically pleasant, and furnished to work not only as functional paths of circulation, but also as meeting places, or informal play areas.

Cars and pedestrians must share streets with the same rights over their use. In places where vehicles become predominant over pedestrians, people must be protected from vehicular traffic, and areas of circulation must be clearly delineated. In places where pedestrians have the right over cars (as in front of schools and parks) vehicular circulation must be slowed down using special paving materials and speed signs. The dimensions and geometry of the streets can help to reduce traffic speed and improve safety for pedestrians. Narrow streets with tight turns will slow down vehicular traffic, without losing their functionality. This will also discourage through city traffic on private residential areas.

When parks and recreational complexes are located the border of the development, or if their dimensions or topography do not permit an effective control from neighboring areas, it should be considered, as a safety measure, to restrict entrance to

those open public spaces during night hours. Areas adjacent to these parks must be well illuminated.

Mixing uses in urban areas is an excellent resource to promote positive social interaction. This type of planning favors formation of territories and casual surveillance of public spaces. More people using public spaces help to reduce criminal activity in the area. Mixed uses urban zones are experienced more actively and are more stimulating than single-use zones. More than a nostalgic allegory of past times, multi-use areas are a natural response to physiological and social needs of humans.

CHAPTER 5. CONCLUSIONS

The prevailing methods to control crime are based on repressive or punishing measures. In the United States, for example, in a period of fifteen years (from 1982 to 1997) the expenditure in the police force increased 204%, in the correctional system 381% and in the judicial system 267% (U.S. Department of Justice, Bureau of Justice Statistics). During the same period of time (1982 to 1997) the crime rates remain relatively stable, within the range of 5,000 to 6,000 crimes per 100,000 people.

Just until recent years a new approach to crime control has been considered. In the early 1960's Jane Jacobs began to analyze how urban environments affect the processes of socialization and how different social mechanisms promote or reduce crime in cities. Later, in the 1970's Oscar Newman proposes a new theory, crime prevention through urban design. After Newman, many other researchers and designers have come to prove the benefits of using certain elements in the creation of urban environments to control crime, elements such as territoriality, surveillance, and access control.

The main purpose of crime prevention through urban design is not only to discourage crime reducing the opportunities for it to happen, but also to encourage the formation of social bonds among neighbors as a way to improve levels of participation in prevention and control of crime in their area.

Crime cannot be understood as a single-solution problem. Communities alone cannot control crime, but participation of the community is important to complement and makes more efficient any program of crime control by police authorities or any other law enforcement agency.

To promote participation of community in these safety programs, environments must allow people to become identified with their place, and with the social groups they belong to. As social bonds among residents increase, and bonds with the place begin building a sense of territoriality in the community, the residents become active defenders of the place against crime.

Territoriality functioning is a complex matter. It is affected by social, cultural, geographical, and human characteristics. As a group, people react to physical characteristics of the place according to their cultural background or their social values learned through life experiences. As an individual, each person perceives and interprets significant elements of the landscape according to his or her own psychological traits.

In order to avoid conflicts among residents and promote a positive social interaction, designers must understand and respect the individual and group requirements and expectations about public open spaces. As the level of community satisfaction with the place increases, participation also increases. This participation of people in neighborhood issues will develop into a sense of territoriality and attachment to the place of residence. The result of this process would be cohesive communities acting as the main controllers of crime in their places of residence.

Cohesive communities, with positive ties to their place of residence will develop familiar and social values for the benefit of their own economic and cultural improvement. In this way, crime is being controlled not only from outsiders, but also from inside the community, forming people aware and respectful of social norms of behavior. Economic improvement of these communities can be expected as a result of the same process.

Since social and economical improvements of communities deeply affected by crime requires time to show positive results, a great percentage of the investment in this type of programs must be directed to bear or rehabilitate the youngest population. Playgrounds and sport facilities, for example, are spaces that promote interaction and foster positive social values. Nevertheless, some conflicting situations must be avoided in order to create a harmonious relation between different age groups. Teenagers activities are usually of an energetic nature and can be considered an inconvenience for older people. Young people also need to feel independent to develop their own group and individual identity; without confusing independence with isolation. Youth population must be involved with the rest of the community, not only to be correctly guided, but also to become their process of identification with the social group they belong to.

The size of the group must be according to the size of the physical space they inhabit and appropriate. In large housing developments it is better to subdivide the whole population into smaller groups, each one identified with a specific area, so they can establish a territory and control the activities on it.

High density is a valuable characteristic to allow and encourage social interaction in a residential area. But density has a limit to permit a harmonious social functioning without becoming a conflicting one. Individuals and groups have been conditioned through social and cultural processes to certain requirements in terms of spatial dimensions. When these spatial requirements are trespassed, a disruption of the social mechanism that ties a community together can occur.

In the process of modernization of traditional cities in America, highways, industrial buildings and large housing developments broke down the original cohesiveness of urban centers. Social groups were also affected, and areas close to these intrusive infrastructures and buildings began a process of deterioration.

These derelict landscapes fostered criminal activity and a detriment of social qualities in adjacent neighborhoods. Low investment by civic authorities and physical and functional isolation made this phenomenon aggravate until a point where it became hard to reverse.

At this point, communities decided to flee of the affected inner city areas and look for a better future in the new suburban developments. As a result, inner city areas became places devoid of social activity and dominated by fear and crime, and the general structure of the city was atomized into small communities detached from each other.

In the new suburban neighborhoods houses were planned as independent units without relation among them. Moreover, community spaces were generally not considered, discouraging interaction among residents and formation of social networks. Although crime continues to be higher in inner city areas than in suburban residential developments, the lack of community association is a negative factor that can propitiate criminal activity in suburban areas in the future.

A solution to the problem of crime that communities living in affected areas adopt is to surround themselves with fences in gated residential complexes. This measure contributes to aggravate the problem of crime by displacing it to the closest areas. It also creates urban environments without social activity that would be helpful to discourage crime on streets.

A new response to the problems created by the residential sprawl in modern cities has been called "New Urbanism". It is basically the recovery of the urban structures of

older, traditional towns, allowing multiple uses in the same area instead of the rigid zoning of modern urbanism. This increases activity on streets, which is also complemented with open public spaces and the creation of pedestrian friendly streetscapes. Larger numbers of people in public areas are excellent deterrents of crime (what Jane Jacobs called “eyes on the street”).

For these urban public spaces to be attractive to people, conditions of comfort and functionality must be fulfilled. Aesthetic value of the space is an important element, also. Natural elements (vegetation, water, and hard materials) are adequate to solve each of the mentioned requirements. By nature, people feel attracted to and inspired by vegetation. Vegetation, in this sense, not only solve functional and climatic requirements of comfort, but also influences people behavior in a positive manner, contributing to counteract the effects of stress in the residents of urban centers. As the levels of stress get lower, the possibilities for social interaction and the motivations for not committing a crime get higher.

From the study made over two inner city neighborhoods in Orlando, Florida, a general conclusion is that social characteristics of the population in any given neighborhood such as poverty, high percentage of broken families, unemployment, social heterogeneity, large numbers of young population, and large proportion of rented homes create environments highly susceptible of being affected by crime.

But social characteristics of the population in a neighborhood are not the only aspects affecting crime rates. Urban physical layout plays also an important role in preventing or promoting crime. In spite of the fact that both neighborhoods had similar social characteristics, crime was considerably higher in the neighborhood where the physical structure neglected possibilities for neighbors to interact and use public areas.

From the theories analyzed and the case study over two neighborhoods in Orlando, a set of guidelines to be applied in design of urban neighborhoods was summarized. The intention of those guidelines is to create environments that reduce opportunities for crime and encourage social interaction between residents. Among those guidelines are:

- Encourage use of public spaces by furnishing them adequately to the specific requirements of the population in the area.
- In order to be highly used, climatic comfort and easy accessibility to those spaces must be considered.
- Any open space for public use must allow visual control from residences around.
- Buffer areas or transitional spaces between public space and private residential areas are useful not only to promote use of those public spaces by residents, but also to avoid conflict between public and private milieus.
- Buffer zones are also needed between commercial or high traffic streets and residential areas. These buffer areas also will discourage outsiders from trespassing to private residential areas.
- In large housing developments, consider breaking it down to smaller housing groups where residents can have easy control of their territory. This will also facilitate interaction between neighbors.
- Include facilities for the community social and physical development. Sport courts, learning centers, art exhibition rooms, and playgrounds in central areas of the neighborhood, where they can be controlled and appropriated.

- Vegetation is useful to create environments attractive to residents, promoting their use. Vegetation also can become a problem for safety if it breaks the visual connection between residences and public spaces, or if it creates places hard to control, or hidden areas able to be used by criminals.

A good conclusion for this paper is based on the words of Edward Hall, who reminds designers of their social compromise:

It must be impressed upon architects, city planners, and builders that if this country is to avoid catastrophe, we must begin seeing man as an interlocutor with his environment, an environment which these same planners, architects and builders are now creating with little reference to man's proxemic needs" (Hall, 1966: 6).

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APPENDIX A

CPTED GUIDELINES (Summary prepared by City of Orlando)

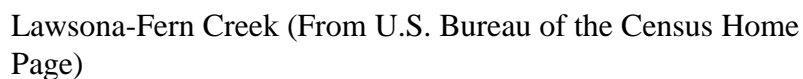
- Single Family Houses
 - Natural Access Control
 - ✓ Walkways and landscaping direct visitors to the proper entrance and away from private areas.
 - Natural surveillance
 - ✓ All doorways that open to the outside should be well lit.
 - ✓ The front door should be at least partially visible from the street
 - ✓ Windows on all sides of the house provide full visibility of property
 - ✓ Sidewalks and all areas of the yard should be well lit.
 - ✓ The driveway should be visible from either the front or back door and at least one window.
 - ✓ The front door should be clearly visible from the driveway.
 - ✓ Properly maintained landscaping provides maximum viewing to and from the house.
 - Territorial reinforcement
 - ✓ Front porches or stoops create a transitional area between the street and the home.
 - ✓ Property lines and private areas should be defined with plantings, pavement treatments or fences.
 - ✓ The street address should be clearly visible from the street with numbers a minimum of five inches high that are made of non-reflective material.
 - Target hardening
 - ✓ Interior doors that connect a garage to a building should have a single cylinder dead bolt lock.
 - ✓ Door locks should be located a minimum of 40 inches from adjacent windows.
 - ✓ Exterior doors should be hinged on the inside and should have a single cylinder dead bolt lock with a minimum one-inch throw.
 - ✓ New houses should not have jalousie, casement or awning-style windows.
 - ✓ All windows should have locks.
 - ✓ Sliding glass doors should have one permanent door on the outside; the inside moving door should have a locking device and a pin.
- Subdivisions
 - Natural access control
 - ✓ Access should be limited (without completely disconnecting the subdivision from adjacent subdivisions).
 - ✓ Streets should be designed to discourage cut-through traffic.

- ✓ Paving treatments, plantings and architectural design features such as a columned gateway can guide visitors away from private areas.
- ✓ Walkways should be located in such a way as to direct pedestrian traffic and should be kept unobscured.
- Natural surveillance
 - ✓ Landscaping should not create blind spots or hiding spots.
 - ✓ Open green spaces and recreational areas should be located so that they can be observed from nearby homes.
 - ✓ Pedestrian scale street lighting should be used in high pedestrian traffic areas.
- Territorial reinforcement
 - ✓ Lots, streets and houses should be designed to encourage interaction between neighbors.
 - ✓ Entrances should be accentuated with different paving materials, changes in street elevation, architectural and landscape design.
 - ✓ Residences should be clearly identified by street address numbers that are a minimum of five inches high and well lit at night.
 - ✓ Property lines should be defined with post, picket fencing (wood or metal), gates and plantings to direct pedestrian traffic.
 - ✓ All parking spaces should be assigned.
- Multifamily homes
 - Natural access control
 - ✓ Balcony railings should never be a solid opaque material or more than 42 inches high.
 - ✓ Entrances into parking lots should be defined by landscaping, architectural design, or monitored by a guard.
 - ✓ Dead end spaces should be blocked by a fence or gate.
 - ✓ Common building entrances should have locks that automatically lock when the door closes.
 - ✓ Hallways should be well lit.
 - ✓ No more than four apartments should share the same entrance.
 - ✓ Elevators and stairwells should be centrally located.
 - ✓ Access to the building should be limited to no more than two points.
 - Natural surveillance
 - ✓ Exterior doors should be visible from the street or by neighbors.
 - ✓ All doors that open to the outside should be well lit.
 - ✓ All four facades should have windows.
 - ✓ Parking spaces should be assigned to each unit, located adjacent to that unit, and not marked by unit numbers.
 - ✓ Visitor parking should be designated.
 - ✓ Parking areas should be visible from windows and doors.
 - ✓ Parking areas and pedestrian walkways should be well lit.
 - ✓ Recreation areas should be visible from a multitude of windows and doors.
 - ✓ Dumpsters should not create blind spots or hiding areas.

- ✓ Elevators and stairwells should be clearly visible from windows and doors.
- ✓ Shrubbery should be no more than three feet high for clear visibility.
- ✓ Buildings should be sited so that the windows and doors of one unit are visible from another.
- ✓ Stairwells should be well lit and open to view; not behind solid walls.
- ✓ Elevators and stairwells should be clearly visible from windows and doors.
- Territorial reinforcement
 - ✓ Property lines should be defined by landscaping or post and picket fencing (wood or metal).
 - ✓ Low shrubbery and fences should allow visibility from street.
 - ✓ Building entrances should be accentuated by architectural elements, lighting and/or landscaping.
 - ✓ Door knobs should be 40 inches from window panes.
 - ✓ All buildings and residential units should be clearly identified by street address numbers that are a minimum of five inches high, and well lit at night.
 - ✓ Common doorways should have windows and be key-controlled by residents.
 - ✓ Mailboxes should be located next to the appropriate residences.
- Target Hardening
 - ✓ Single cylinder dead bolt locks should be installed on all exterior doors.
 - ✓ Door hinges should be located on the interior side of the doors.
 - ✓ Sliding glass doors should have one permanent door on the outside and the inside moving door should have a locking device and a pin.

(City of Orlando, undated).

CENSUS TRACTS AND BLOCKS NUMBERS WITHIN THE STUDY AREA



VITA

Gustavo Adolfo Barreto was born in Cali, Colombia. He received his bachelor's degree in architecture from Universidad del Valle, in Colombia, in September 1991. He then worked for different design and construction firms in his home country until he decided to pursue a superior professional degree. With this motivation in mind, he traveled to the United States, and began in 1999 a master's program in landscape architecture, at Louisiana State University. He will receive this degree in May 2002.

During his studies at Louisiana State University, Barreto has received different recognitions from the school for his performance as a student. In the spring 2001 he and his team were awarded with the first place in the Annual Chancellor's Design Competition. During the same semester he received the Design Award and the Graphic Communications Award from his school. Later, Barreto received the Certificate of Honor for Excellence in the Study of Landscape Architecture from the American Society of Landscape Architects, perhaps his most important recognition until this moment.

Barreto has also worked as a drafting instructor at his school, and is actually an intern at HHI Design, an important firm of urban and landscape design based in Orlando, Florida.